

AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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Notes and Suggestions for the Month.

The sun enters the sign Virgo, in August. The constellation of the Virgin is not particularly conspicuous in the heavens. In its course the month usually gratifies the husbandman with copious and refreshing showers, and this the artist may have in view when he represents the farmer maid as the bearer of refreshments to the weary workers in the field.

It would be very remarkable if the drouths which have so seriously damaged the crops in many sections of our country, should continue during the present month. The total amount of rain which falls over any extensive region, is very nearly the same year after year. The smaller the region the less accurately does the rain-fall correspond, one year with another, or one month with the same month of another year. Our first reports of drouths, and of any wide spread damage to crops, are always exaggerated. We hear first from those sections where the damage is most severe, and it is the interest of a certain class of the mercantile community to magnify such reports and increase the fears that the crops will be short in order to secure an advantage in their speculations. The dryness of the months of June and July, up to the time of our going to press, though no doubt exaggerated, leads us to consider how best at the 1st of August, to counteract the effects of drouth.

It is too late to sow cereal grains, except millet and buckwheat, the former being sowed for fodder. It is not considered advisable, however, to sow millet so late as the first of August.

In case it is very desirable to have an addition to the available grains, buckwheat may be sown with winter wheat in August, and cut before frost. The wheat is said to receive but little damage; for after the buckwheat is cut, it has still 4 or 6 weeks of good growing weather. Turnips are, however, the great staff and stay to fall back upon. Sown the first week in August, the probabilities are in favor of a fair crop. Sown a week later than that, the crop will probably still prove remunerative, if the soil be good, if insects do not interfere, and if severe freezing weather holds off. The amount of food which may be raised upon an acre of good ground after the first of August is great, amounting to between 250 and 400 bushels per acre. It is hardly worth while to sow rutabagas after July, for their growth is slower and they can not be expected to mature sufficiently to make a profitable crop, though if they do fill out they make an excellent table vegetable.

Before the end of July, if the weather has proved favorable, the great bulk of the hay and grain crops of the country will have been secured, hoed crops will have advanced so that hoeing will be of no advantage, and farmers will have a few weeks of comparative leisure. This should be conscientiously embraced, and used to promote health of body and mind. This too close "sticking to work," shortens the lives of many farmers. Recreation of some sort is a genuine life insurance. The drying of the soil, the subsidence of water in the swamps, and the drying of wells and springs in the midst of a drouth afford opportunities for planning for drainage and irrigation, observing levels, digging muck from holes and sinks, and ditching in low land not otherwise accessible, which ought not to be neglected. All these things will occur to a wide-awake farmer, and though lack of "help" may prevent his carrying out his plans, still plans for future labor, in time may be so well matured, being viewed in all their bearings, that much labor will be saved when he really comes to execute the work thus thought over.

Work for the Farm, Barn, and Stock Yard.

As the season advances, farmers will be able to estimate the quantity of produce they will have at disposal. Prices are likely to fluctuate so much that it will be impolitic to contract far ahead, to deliver produce. The best way will be to sell at the market price at the time of delivery—every other course will create dissatisfaction. The demand for all kinds of produce will be almost limitless, at very good prices.

Buildings.—The sheds and stables for stock of all kinds, especially for such as are to be fattened during the fall and winter, should be looked to at this season—renewed if necessary, made tight and comfortable, ventilation provided, and painted if they need it. Straw sheds and straw roofed sheds (see article in January *Agriculturist*) may be most easily made at threshing time.

Buckwheat may be sown even so late as the 15th of the month, south of lat. 41°, with reasonable hopes of a crop. If you get any crop it will probably be a very good one, for buckwheat fills plumper the later it is in the season. The risk is from the occurrence of early frosts.

Butter.—The butter yield may be essentially increased by feeding oil-cake meal in moderate quantities. At present prices at home, and the ready market it finds abroad, every ounce of butter made, should be of quality fit for export.

Cattle.—It is important to keep all kinds of cattle in good flesh; if they lose fat at this season it will be hard to regain it so that they will begin the winter in good condition. Give salt, and look to the water in the pastures, not only to have it there, but that stock have good water.

Cheese Making.—See article on this subject (p. 235). The production of this excellent article of food ought to be greatly increased, and in the heat of summer it is usually more profitable to make cheese than it is to make butter.

Corn in the field should be let alone after this season—even if it blows down, let it right itself. Keep the fowls out of the field. Sweet corn forms a delicious addition to our table vegetables, and as it matures in succession, it should be dried for winter use, taking care not to let it get too old and tough before picking.

Draining.—There is much land which may be drained at this season, but at no other. This work should be pushed forward as the rains may fill the low lands any day. If labor can be obtained for the purpose, go also into the thorough draining of uplands—it pays.

Fallows are relics of the agriculture of a former generation, and fast becoming obsolete as they ought to be. The best fallowing decent land can have, is a crop of roots. No man ought to take from land more than he gives to it. The whole object of the fallow is to enable men to skin the land more effectually. Let no land that is good for anything lie idle. If it needs fallowing, put on turnips in drills and plow and hoe them; or plow in growing buckwheat.

Fences.—Do not let them harbor weeds; dispense with every rod of fence possible, but maintain those that must stand, in good order.

Grain Fields are apt to be full of foul weeds ready to go to seed. Glean thoroughly with a horse rake, and it will often pay to rake in two directions, if the stubble is long, and feed the gleanings to the hogs or poultry; then burn over the stubble so as to kill the weed seeds.

Grass.—August is probably the best month in the year for manuring grass lands. Apply fine manure of any kind, soon after mowing.

Hay.—Push forward the haying with all dispatch, for the grass is generally injured by delay.

Horses.—Let them stand when not in use, in dark but airy stables during the day, and turn them into the pasture at night. This will be grateful to them, and they will keep in much better condition, and secure freedom from bots.

Irrigation.—See article on page 236. Make this subject a study. The sources of water are streams, ponds, springs, and wells. The last two of course, yielding usually but a small supply. The water may be conducted by following the exact level of the source to parts of the farm, where it will be quite surprising to find that it will run.

Manures.—Push forward the compost heaps, using every available material. The manure accumulating at the stables may very profitably be used in making compost. Salt hay, soda, weeds, and muck constituting the bulk of the heap, the manure being spread in layers so as to get up a uniform heat by its fermentation. See article, p. 234.

Meadows.—Put a greater breadth in order for the mowing machine, by sinking rocks, clearing off stones and stumps, leveling hummocks, etc.

Oats.—Cut as soon as the grain in the latest heads becomes plump, and may be rubbed out in the hand, but before there is danger of the ripest shelling. It is not desirable to have the grain get too ripe, as the straw is worth less for feeding.

Pastures.—When cattle droppings accumulate on rich pastures, scatter them with a maul. Mow and burn weeds before the seeds ripen. Suffer no pieces to be too close fed. It often pays to run a mowing machine over the pastures to cut the tall wiry grass which may have been left by the cattle, and this gathered by the horse rake, makes a good addition to the stock of bedding or to the compost.

Potatoes.—Unless the ground can be occupied by other crops, do not dig potatoes early, except for marketing. Turnips may well be sown after early potatoes are removed, unless winter grain or grass is to follow. Don't give up the land to weeds.

Poultry.—Allow them the range of the grain fields after harvest. Those of sufficient age will fatten as readily now as later, and bring better prices. Feed greens of some kind to all confined in yards. Whitewash the poultry houses, grease the nests and roosts. A little calomel in the ash-box in which the fowls dust, is said to destroy lice.

Root Crops.—Keep the soil loose, open and free from weeds; thin out freely.

Sheep.—Tar the noses of all to repel the fly. (See article on page 239.) Separate the rams from the ewes; wean the lambs and give them a good chance by themselves if possible. Keep ewes that have lambs unfit to wean, with the lambs, and in small flocks let the yearlings run with them. After taking a ewe from her lamb, examine her udder, and milk her if there is any danger of caked bag.

Swine may be put upon a diet of peas, feeding the unthreshed vines. There are few, it is likely, who have old corn to begin feeding with this year. Get hogs in as good condition as possible before you begin fattening in earnest with corn. Make preparations to cook the feed where it is practicable.

Timber.—Cut for building and fencing purposes; peel and lay up under cover to season.

Turnips.—Sow the Purple-top Strap-leaf variety on any land not otherwise occupied, the less seed used to the acre the better, as a rule—1 pound is enough. It may be mixed with sifted loam, plaster, or bone dust, to secure an even cast, and in case it comes up too thick, the ground may be gone over with a loaded harrow, having half the teeth out. This leaves the turnips in rows, and stirs the soil well also. Do not put turnips on land you want for corn next year. Corn does not do well where turnips were raised the year before.

Winter Grain.—Wheat may be sown to good advantage after the 20th, if the weather is favorable.

Orchard and Nursery.

The harvest from the orchard begins this month. Early apples, pears, and peaches are to be gathered and marketed, and, as with all other fruit, the price will greatly depend upon their condition when they reach the market. Peaches and pears should be picked before they soften. If gathered when ripe, but still hard, they will be in eating condition by the time they reach the consumer. Let all baskets,

crates and other marketing packages be plainly marked with both the name of the owner and the person to whom the fruit is consigned. If it is desired to establish a good market reputation, let the parcels go without topping, but of uniform character from top to bottom. Endeavor to have your name carry with it the guarantee of honest dealing. Where there is a surplus, do not let it go to waste, but dry or put up in cans for winter use, and for hospitals. Trees should never be so overloaded that the limbs need support, still if thinning has been neglected, the branches should be prevented from breaking down by props of some kind.

Budding.—See illustrated article on page 228.

Evergreens.—If to be removed a short distance it can be successfully done this month, if care is taken to keep the roots from drying. Transplant on a cloudy day, taking up a good ball of earth on the roots. Fill the holes with water and let it soak away, before setting the trees, and fill up with good soil.

Insects.—Borers lay their eggs now and the grub soon works into the tree; probe him out. A smearing of soft soap around the base of the tree will be serviceable. Break up late nests of caterpillars.

Layers.—The growth of this year of shrubs and stools is now ready to layer. Spade and manure the ground, in order to induce roots to start promptly, and peg down the branches deep enough to be below the reach of the dryness of the surface.

Pruning.—Better do it this month than leave it until winter or spring. See last month's Calendar.

Seedlings.—The beds need shading as heretofore directed; keep the weeds out and stir the soil between the plants. Water if the plants are suffering.

Seeds.—Gather those of fruits and shrubs as they perfect and sow at once or keep for spring sowing, putting in sand, to prevent excessive drying.

Thinning.—If this has not been already attended to, it may be done on late varieties with benefit.

Water.—If trees set this spring are suffering from drouth, remove the surface soil, give a copious watering, let it soak away, and replace the earth.

Weeds.—Clean tillage is required in both orchard and nursery. Keep the weeds down in the rows as well as between them. The bare spaces left around trees in orchards laid down to grass, should be kept clean, and not be allowed to grow up to weeds.

Kitchen Garden.

Now comes the harvest. Almost all that has gone before has led up to the present realization of fresh vegetables every day, a blessing which the dwellers in cities can not enjoy. Who ever tasted green peas in New York? There are things sold called peas, but they are mesly grains, with tough skins, but entirely lacking in the delicious sweetness which belongs to the real thing. With peas, as with all other fresh vegetables, there should be but a short interval between the garden and the pot. Those who have followed our teachings, no matter how humble their condition, are enjoying luxuries which all the wealth of dwellers in cities can not buy. He who has a garden not only rejoices in the things which appear upon his table, but he has often a supply to sell to the less provident. If produce is to be marketed let it be gathered late in the afternoon, loaded overnight, sprinkling those things which wilt, and arrive at the market at the earliest hour the next morning. Farmers who live within a short distance of towns and villages will find it to their profit to gradually extend the culture of garden vegetables, and to leave the raising of large grain crops to those who are at a distance from market.

Asparagus.—The growth of tops should now be encouraged, as they are accumulating material for next season's crops. If seed is wanted for new beds, the most vigorous roots should have been marked for this purpose. Gather the seeds as soon as they ripen, and sow at once, or keep until spring. The shading by the tops will keep down all but a few coarse weeds, which may be pulled by hand.

Beans.—Any of the bush sorts may be sown for late use, or for pickling. The Refugee or 1000 to 1 is usually preferred for salting.

Beets.—In pulling for use, take from those portions of the bed which are most crowded. Weed those sown last month, and thin to six inches apart. Hoe frequently until the tops prevent working.

Cabbages and Cauliflowers.—If any plants remain, set them out for latest crop. Hoe often. Destroy caterpillars or they will destroy the plants.

Carrots.—Many prefer young carrots, and where this is the case seed sown now will give a late crop.

Celery.—That planted early will need earthing up, taking care not to get the soil into the heart of the plant. The plants for a late crop should now be put out. Directions for preparing the trenches were given in the June *Agriculturist*. Shorten the roots of the plants and remove any large straggling leaves. If the soil in the bottom of the trenches be dry, water it before setting the plants, and if the weather be very hot, shade them for a few days with boards or brush laid over the trenches.

Corn.—Mark the earliest and most prolific stalks for seed. Do not disturb the roots of that which is well advanced, but hoe thoroughly all late plantings, and if backward, give a stimulus of hen manure.

Corn Salad.—Sow the last of this month or the first of next, in shallow drills six inches apart, and roll or tread down the soil over the seed.

Cucumbers.—Reserve a sufficient quantity of the earliest and finest fruit for seed, and pick off all others from these vines. Gather for pickles as soon as large enough. Pickles for the army may be of larger size than those usually put up in bottles.

Egg Plants.—Hoe well, and hill slightly. If the fruit touches the ground it is apt to decay. A shingle or some similar protection will prevent this. It should be taken for use before it loses its dark purple color, or the seeds begin to ripen.

Endive.—Transplant for the late crop, setting the plants 1 foot apart each way. Some of the early may be blanched as directed in June, page 178.

Herbs.—Continue to gather aromatic herbs as they come into flower and dry in the shade.

Lettuce.—Sow at intervals, in partly shaded spots.

Melons.—Much of the fruit set will fall to ripen, and it is well to take off all that the frost is likely to injure. Put a handful of straw or a piece of board under the ripening fruit, and give it a turn occasionally to ensure even ripening. All melons are better if picked in the afternoon, and cooled in the refrigerator for use next day.

Mushrooms.—The beds may be made next month, and it is well to be collecting a supply of horse droppings, and have them in readiness.

Onions.—As soon as the tops of the greater part of the bed fall over, the crop is ready to harvest. Let them remain a few days in the sun and then stack in heaps of two or three bushels each to cure. Where they are marketed at once, this is not necessary. If stored in a cool airy place, there is no difficulty in keeping onions sound a long time.

Peas.—Some of the early varieties may be sown now with a fair chance of getting a late supply. Save seed carefully from the earliest and best. Clean off the vines after picking, and feed to sheep or swine, and prepare the ground for turnips, etc.

Potatoes.—Of course only the early sorts are grown in the garden. In digging from day to day, bury the green tops as they will serve to enrich the soil. Allow those intended for seed to remain until thoroughly ripe, but dig before the fall rains.

Radish.—The winter sorts may be sown now. The best of these is the Scarlet Chinese Winter. It is superior to the white and black winter sorts.

Seeds.—Gather with care all that are ripening. Many, such as lettuce, salsify, etc., will ripen if the stalks are cut when the seeds are fully formed, without the waste by winds and birds which will occur if left in the garden until quite mature. Label every thing as soon as it is gathered, and do not in any case trust to memory for names.

Spinach.—Sow at intervals for late use. The crop to winter over may be left until next month.

Squashes.—Use or market the summer sorts before they get too old. Reserve the earliest for seed. Winter sorts are still subject to attacks of insects, and need watching. Destroy the squash bug and its eggs. The Hubbard and Yokohama varieties are eatable at any time, after they get large enough.

Sweet Potatoes.—Keep clear of weeds and prevent the vines from striking root, by moving them.

Tomatoes.—See last month's Calendar. Select the earliest and smoothest fruit for seed.

Turnips.—Thin the long kinds as soon as large enough, and give ashes and plaster, if insects attack them. Plant the round sorts on ground left by peas, potatoes, etc. The Red-top Strap-leaf, and White Strap-leaf, are among the best.

Weeds.—Follow the advice so often repeated. Keep them in subjection by horse-power, hand-power, or both. See description of Purslane, p. 245.

Fruit Garden.

Those who have an abundance of small fruits will preserve a good supply for winter use in bottles or by drying. Sufficient directions for preserving are given in former volumes, and the whole matter is briefly summed up on page 181, for June. Let nothing of the fruit kind be wasted, while there are men in hospitals who will prize it above gold. Bottled or dried fruits require but little sugar and are better for the sick than jellies or jams.

Blackberries.—The New Rochelle is the variety most generally cultivated, and is black long before it is thoroughly ripe. If left on the vines until perfectly ripened they are sweet and excellent.

Currants.—Cultivators differ as to the time of pruning, some performing the operation as soon as the fruit is off, while others leave it until early winter or spring. Our own plan is to remove suckers and superfluous shoots now, and leave the general pruning until the leaves have fallen.

Dwarf Trees.—Thin the fruit and control the growth by pinching as directed last month.

Grapes.—If the vines have been properly trained, but little now needs to be done, except to pinch off the laterals and the new growth from the ends of the fruiting canes, as often as needed. Use the hoe freely. Insects will continue to be troublesome, and hand-picking must be the chief reliance. If the bunches show any decaying berries, remove them by means of the scissors. Young vines, not yet fruiting, need the same care to secure the best possible growth of wood. If not watched, the caterpillars will seriously damage the young growth. Keep all securely tied to the trellis or stakes.

Raspberries.—Allow only two or three of the strongest shoots of each root to grow, and remove the rest. Promote the growth by forking in around the roots a dressing of well decomposed manure.

Strawberries.—Clip the runners and weed those cultivated in hills. Sufficient is said elsewhere on varieties and the propagation of plants.

Flower Garden and Lawn.

This is an uncomfortable month for the cultivator of flowers. The heats are trying to vegetation, and in grounds of any extent, a general watering is impossible. The most that one can hope to do is to keep plants newly set this spring from perishing. If a tree or shrub ceases to grow, or looks sickly, remove the earth around it, give that over the roots a thorough soaking, replace as before, and give a mulch. One such application will probably save the plant until rains come. Laying out of new grounds or any improvements in the present plans may be projected and put into execution now, and lists of plants made, in order to be ready for the autumn planting of trees and shrubs.

Box Edging may have its final clipping now.

Budding.—All ornamental shrubs propagated in this way may be worked, if the directions given in detail on page 228 are observed.

Bulbs.—If any spring sorts remain in the ground, take them up as soon as the foliage withers, and keep them in a dry, cool place until autumn.

Climbers.—Provide proper supports and see that they cling to them. They often need a little help.

Dahlias.—Keep tied up as directed last month. Remove imperfect blooms and those, the beauty of which has passed. The borer makes its way into the stems; watch for and dig it out carefully. Keep rose-bugs and grasshoppers away from the flowers.

Fuchsias.—If these have partial shade they will keep blooming all summer. Put in cuttings for plants to winter over. They root very readily in sand or sandy soil, and will make good plants.

Gladiolus.—These are now large enough to push their flower stalks, and need tying to neat stakes.

Hoeing.—During the dry season the hoe and rake must be kept in use, not only to remove weeds, but to loosen the soil and help sustain the plants.

Hollyhocks.—Sow this month, and the plants will bloom next year. Save the best for seed.

Insects.—Though these are not as troublesome as in former months, there is still need of watchfulness. Dusting of lime or ashes, and syringing with whale-oil soap will be needed. Above all, hand-picking is the great remedy. When an insect is caught and crushed he is sure to be of no further trouble.

Layers.—Almost everything in the way of woody plants, and the firmer herbaceous ones, can be multiplied by layers. See Orchard and Nursery.

Mignonette.—Sow in pots for a late bloom.

Pansies.—Sow this month for plants to flower in spring, choosing a partially shaded spot. Favorite kinds may be multiplied by cuttings and layers.

Perennials.—A year may be saved by sowing the seed of most of them now. Fox-gloves, Sweet Williams, Lychnis, and many others will make plants strong enough to endure the winter and will generally flower next year.

Potted Plants.—Those set about the grounds must not suffer for want of water. Loosen the surface of the soil in the pots and keep out weeds.

Roses.—Layer the new growth and keep off insects.

Seeds.—The finest flowers should be marked and seed collected from them as soon as ripe. Some seed vessels, such as Pansy and Phlox, scatter their seed when they burst. All such are to be gathered before fully ripe, and put under a sieve to dry.

Verbenas.—An abundance of natural layers may be found, or they may be made in a few days by pegging down the branches. Pot of some of these to keep for blooming in the house.

Weeds.—They grow rapidly now and will need a frequent application of the hoe and rake.

Green and Hot-Houses.

The general directions of last month are to be followed. See that none of the plants are burned by the sun. All repairs should be made in ample time to have all in readiness for the return of the plants. If new structures are to be built, it should be done at once. Overhaul and repair heating apparatus, lay in a stock of fuel, and a supply of potting earth. The present is the proper time to sow a large number of florist's plants that are raised from seed, as *Calceolarias*, *Chinese Primroses*, etc. Small seeds should be sown in *very fine* soil, and in watering take care not to wash them out.

Cold Grapery.

The fruit will usually begin to ripen by the middle or end of the month, and as it progresses, the watering should be discontinued, and all sudden atmospheric changes guarded against, though a free ventilation is to be kept up. When the fruit is ripe the upper ventilators may be left open at night. Mildew is likely to appear in warm, damp days, and is to be counteracted by the use of sulphur and dryness of the air, as hinted last month.

Apiary in August.

Prepared by M. Quinby—By Request.

The season for early honey in many places has been propitious. Many colonies, particularly the Italians, have already filled combs with honey, that ought to be occupied with brood. With the old box hive there is only the partial remedy of adding surplus boxes. But with the movable comb hive, the matter can be controlled admirably, by substituting empty combs for full ones, as recommended last month. When the honey can not be removed, the bees will be obliged to store the buckwheat honey gathered this month, mostly in the boxes. Give ample room by adding all boxes needed. When the colony is strong, and all boxes nearly full, only wanting some of the corners filled out, (which will often take long enough to half fill empty ones;) there is a great saving of precious time by making holes through the top of empty boxes, and setting them on the hive, putting those part full above them. By the time the upper ones are finished, the lower ones will be ready to raise in the same way. This gives room for double the number of bees to labor at the same time. Any boxes of clover honey nearly full, should be removed on the first of the month, to prevent the mixing of buckwheat honey with it, which will make it darker. Boxes that are full may be kept safe from the moth worm, with the least trouble, by leaving them on the hive until autumn. The honey will not be nearly so white, as if removed as soon as filled. The boxes will also be in the way of empty boxes that ought now to supply their places. The greater quantity and purer quality of the honey will induce most bee-keepers to remove it, and destroy the worms if they hatch, with a little burning brimstone. Where there is no buckwheat raised, all boxes may be removed now. When the bees begin to take the honey from the unsealed cells, it is time to remove them. Look carefully for diseased stocks. Drive out any found, to begin anew. Any queenless colonies discovered now, should be supplied by dividing a buckwheat swarm that may issue this month, giving them the half containing the queen, and returning the remainder to the parent stock. To ascertain where the queen is, divide the swarm equally, put in two hives, a few feet apart. In a few minutes those without a queen will be attracted to the hive containing her, which should be covered to keep them out, then shake them out by the old hive. If it is desirable to rear Italian queens late in the season, when the black drones have disappeared, for the sake of securing purity, a stock in which bright colored drones are numerous, should be selected and rendered queenless. When honey falls in flowers, they should be fed a little each day, or the drones may be destroyed.

Exhibition Tables at the Office of the American Agriculturist.

The following articles have been placed on our tables for exhibition since our last report:

FRUITS.—*Strawberries*: Brooklyn Scarlet, Empress Eugenie, Marguerite, Monitor, Prince Frederic William, and Russell's Prolific, by Wm. S. Carpenter, Rye, N. Y. Basket of several varieties; E. C. Cortelyou, Staten Island. *Triomphe de Gand* and *Austin*: Wm. Quin, New York city. *Russell's Prolific*: A. J. Caywood, Modena, N. Y. *Heine's White*, very fine: Wm. F. Heine, Morrisania, N. Y. *Gooseberries*, very fine: George Mayland, Brooklyn, N. Y. *American White*: Robert B. Dore, New York city. *Currants*: Fine specimens of *La Versailles*, Cherry, Red Dutch, Red Grape, Short Branched Red, Champagne, Gloire de Sablon, White Dutch, and Prince Albert; E. Williams, Mont Clair, N. J. Red Dutch; Elsie Wheeler, West Orange, N. J. *Blackberries*: New Rochelle, first of the season; C. S. Pell, New York Orphan Asylum.

FLOWERS, ETC.—White Cactus in bloom; B. Van Gilderwas, 86th street, New York city. Bouquets, cut flowers, Chinese Hydrangeas, Roses, Heliotropes, Fuchsias, etc.; Miss A. M. Cortelyou, Westfield, Staten Island. Chinese Pinks, 21 varieties: Charles Kuttler, West Hoboken, N. J. Poppies, very fine; C. S. Pell, N. Y. Orphan Asylum. Dahlias, fine and first of the season; C. W. Moore, New York city. Fuchsias, Geraniums, Nasturtiums, Cannas, White Roses, Hollyhocks, Erythrina or Coral Tree, etc.; O. Judd, Flushing, N. Y. Trum-

pet Lily, very fine, Hollyhocks, Summer Savory, etc.; Alexander Marsh, Paterson, N. J. Lady's Slipper; J. Gregory, Jersey City, N. J. Trumpet Lily, Mrs. Gale, Brooklyn, L. I.

VEGETABLES, ETC.—Tom Thumb Peas and new Buck-eye Potatoes; Wm. Clarendon, Sing Sing, N. Y. Fine Cucumber; Charles Mandewirth, Fishkill, N. Y. Potato Onion, Early June Potatoes and Early Valentine Spring Beans; G. M. Usher, Port Richmond, N. Y. Two fine Cucumbers; E. C. Cortelyou, Staten Island. Samaritan and Early June Potatoes, June 28th, large growth; J. Van Brunt, Fort Hamilton, L. I. Naked Barley, very fine; no name. Black Poland Oats; S. W. Miller, Elizabeth, N. J. Grass, *Calamagrostis Canadensis*, from Swamp; John B. Vroom, Washingtonville, N. Y. Curious growth of Summer Squash; Jno. W. Christie, Hackensack, N. J.

MISCELLANEOUS.—Cahoon Nut from British Honduras; A. C. Burr, New York city. *Bitum capitatum*, or Strawberry Blite, W. S. Carpenter, Rye, N. Y. Large Brahma Protra egg, weight $4\frac{1}{2}$ ounces. Egg in the interior of another; S. G. Colt, New York city. Double Egg, similar to last, outer one measuring in largest circumference $8\frac{1}{2}$ inches, in smallest, $7\frac{1}{2}$ inches, from Black Spanish fowl one year old; W. W. Denslow, High Bridge, N. Y. Samples of Sorghum sugar made on Cook's Evaporator; C. B. Lines, Topeka, Kansas, and C. D. Roberts, Jacksonville, Illinois.

Directions for Budding.

A large share of budding is done during this month. When the buds of any sort are well formed, and the bark of the stock peels freely, is the time to insert the bud. So many ask how to bud and perform simple operations, which are great mysteries to those who have not tried to do them, that we are frequently obliged to go back to first principles. At this time we introduce cuts illustrating the operation of budding for the benefit of the inexperienced. Stocks are one or two year old trees, raised from seeds or cuttings. Buds from trees of desirable kinds are formed upon the shoots of the present season's growth, in the axils of the leaves, or where they join the stem. Cut a shoot of this kind, remove the upper unripened buds and the lower undeveloped ones, and also the leaves, letting their stalks remain as in fig. 1. With a sharp knife remove a bud, cutting from below upward. The figure whence it was cut. Select a smooth place upon the north side of a stock, and as near the ground as possible, and with the knife cut through the bark as



Fig. 1. shows the bud and the place whence it was cut. Select a smooth place upon the north side of a stock, and as near the ground as possible, and with the knife cut through the bark as



Fig. 2.



Fig. 3.



Fig. 4.

shown by the line in fig. 3. Lift the corners of the cut portion, and insert the bud, crowding it well down into the cut as in fig. 4. A portion of the bark of the bud will stick above the cross-cut on the stock; this should be cut off even with the

cross cut. Bind all up with bass bark, lamp wicking or woolen yarn, as shown in fig. 5, taking care to bind so as to exclude rain and to keep the wounded bark from curling up and drying. If the buds appear plump and sound after they have been inserted a fortnight, it is fair to conclude that they have "taken." With this brief description and the engravings, one can make a few trial experiments on worthless twigs and then go to work with a good chance of success. Label all budded trees and make a record of them to avoid future trouble.

Agricultural Exhibitions in 1864.

State Fairs, etc.

New England.....	Springfield.....	Sep. 6-9
Am. Pom. Society.....	Rochester, N. Y.	13
Ohio.....	Columbus.....	15-18
New York.....	Rochester.....	20-23
Wisconsin.....	Rochester.....	21
Upper Canada.....	Janesville.....	26-30
Pennsylvania.....	Hamilton.....	26-30
	Easton.....	27-30

County Fairs.

VERMONT.

Chittenden Co.....	Burlington.....	Sep. 27-28
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CONNECTICUT.

Fairfield Co.....	Norwalk.....	Sep. 27-30
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NEW YORK.

Putnam Co.....	Carmel.....	Sep. 16-18
Otsego Co.....	Unadilla.....	Sep. 27-28

NEW JERSEY.

Burlington Co.....	Mt. Holly.....	Oct. 4-5
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PENNSYLVANIA.

Bucks Co.....	Newtown.....	Sep. 27-28
Luzerne Co.....	Wyoming.....	Oct. 5-7

OHIO.

Richland Co.....	Mansfield.....	Sep. 7-9
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INDIANA.

Fayette Co.....	Connersville.....	Sep. 6-9
Laporte Co.....	Laporte.....	Oct. 12-14

ILLINOIS.

Kankakee Co.....	Kankakee City.....	Sep. 7-9
Cumberland Co.....	Majority Point.....	Sep. 29-Oct. 1
Monroe Co.....	Waterloo.....	Oct. 12-14

New York Live Stock Market.

BEEF CATTLE.—Average weekly receipts 4,317, much the same as last month. In our last report the decline of prices from the extraordinary rates they had reached, was noticed; the market continued to fall for two weeks, showing a depreciation of 1 @ 3c. per lb. The third week—"Fourth of July week"—the supply was limited and prices advanced fully 1c., the prospects indicating still further rise; but the past week the weather was hot, the market was heavily stocked, closing dull, and sales slow; prices falling off about 1 c. on the lower qualities of cattle, but much less on the better grades. Prices stood at about 17 @ 18c. per lb. for prime bullocks, dressed; medium to good 14c. @ 16c.; very thin and common from 10c. @ 13c. These figures show a material falling off from the prices quoted in last month's *Agriculturist*. The Cattle market at present seems to be almost wholly ruled by the supply, and this is to a considerable extent controlled by speculators, and to a remarkable degree independent of the constant fluctuation and rapid rise of the gold market, and the advance of many articles of merchandise.

Milk Cows.—The arrivals average 156 per week,—a falling off of 31 head from the averages of last month. Our last report indicated a decline. Some of the distilleries have been closed, and as these take many of the cows brought to this market, there is now still less call for them, and sellers say there is a decline of \$10 @ \$15 per head since prices began to fall. We quote poor common cows at \$20 @ \$35; good \$50 @ 65; really prime and fancy cows \$80 @ \$100.

Veal Calves.—The weekly average supply has been 1,725, not including those sold direct to butchers. Prices are not quite so good as quoted last month. Prime veals quote at about 11 c. live weight, from this to 10c. @ 7c. @ 6c. for good to thin; grass fed \$7.50 @ \$8 @ \$12 etc. per head, according to quality and weight.

Sheep and Lambs.—The weekly receipts average 12,673, about double those of last month. Prices have fluctuated during the month, but have not been as high as the closing figures of our last report. Shorn sheep on the 12th inst. rated at about 6c. @ 6c. for common; 7c. @ 7c. for good, while selected ones would probably bring fully 8c., live weight. Lambs rate 9c. @ 12c.

Live Hogs.—The weekly average is 13,515,—more than 1,000 greater than last month. The receipts have increased each week of the past three, being 8,000 heavier the last week of the month than the first; this we attribute to the high prices. Speculation has been active in the pork trade, and this has quickened the hog-market. Hogs advanced for the three first weeks included in our report, but the last week there was less firmness, some grades showing an advance, while others exhibited a decline. Pork on the 13th was considerably lower, and indications favor a decline in hogs, yet it is unsafe to predict anything in times of such commercial excitement. The quotations below show an advance of 2c. @ 2c. per lb., live weight, over prices quoted last month, and 3c. @ 3c. over those of two months ago. Prime corn-fed rate at 11c. @ 11c., live weight; medium at 11c. @ 11c.; light and fat 11c. @ 11c.; still-fed 10c. @ 11c.



Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form, for want of space elsewhere.

The Strawberry Distribution will commence about the last of this month and proceed as rapidly as possible. (See last page.) Instructions for care of plants, and propagating from them as rapidly as possible are given on page 242. Arrangements should be made beforehand by those who go to the Post Office only once or twice a month, as is sometimes the case, to go offener or to have the plant given by the Postmaster to some neighbor who will deliver it at once, for though it is probable the plants will live a fortnight out of the ground, they will do the better the sooner they are planted.

Note about Strawberries.—Some of our subscribers misunderstand the conditions of the strawberry distribution by mail, and apply for the plants without sending the 5 cents. Of course we can not send them, and they may be disappointed.

Lessons from the Drouth.—In reviewing his own agricultural experience the writer is confident that he has learned more salutary lessons from drouths, and cold wet spells, from mistakes and blunders of his own and of others, than from the greatest successes. So not only may these dry seasons be productive of good in destroying insect life, and favorably changing the character of the soil, to a certain extent, giving opportunities to drain etc., but we may all take lessons in deep plowing and working of the soil. Not one single really deeply worked field or plot of ground have we seen which was suffering at all from drouth. The corn stands, dark green, strong and thrifty, next to fields of poor, little, yellow shrivelled, curly-leaved specimens, which do not now look as if they would return the seed. Grain, clover, and fields of other crops look about the same. Well enriched soil, underdrained and plowed 10 inches deep will stand almost any drouth.

The Agricultural Exhibitions this fall promise to be spirited and will be successful if encouraged as they deserve. We write to urge farmers to sustain them, not merely because the officers in charge deserve this appreciation of their labors—often perplexing, severe and wholly unequipped—but for the sake of the farmers' own interest. Improvement in breeds of stock, varieties of produce, implements, and other agricultural matters are brought directly under the observation of those most interested, by means of these annual gatherings. A visit of an hour, properly improved, may result in more pecuniary profit to a farmer, than months of hard labor. For example, a gentleman at such an exhibition, a few years since, noticed a sample of what appeared to be a superior variety of rye. He procured a small quantity of seed, and from its produce, realized hundreds of dollars of clear profit, by selling it for seed to eager purchasers in his own neighborhood. The inventive and mechanical world are wide awake, and the farmer must be so too if he would avail himself of the aid they are bringing within his reach. A single improved implement may save the cost of one or two hired men in a season. Illustrations might be multiplied, from every department of agricultural industry. Let work and business be arranged for attending the "Fair", with the understanding that it is one of the indispensable appointments of the year—as much as a call from the Provost-marshal. Uncle Sam needs skillful men in the field of culture as well as the field of battle; turn out then on review days.

Turnips or Carrots for Fattening Cattle.—"Michigander" asks, which is best? Carrots

are a much more valuable root than turnips, pound for pound—they will keep longer, sell for more, are better for horses and milch cows and working-cattle. We have never heard of cattle being fattened exclusively or even principally on carrots; but they are often, and very profitably, fed in connection with grain. Turnips however, sometimes in this country, and commonly in England, constitute the *exclusive* feed. The cattle have no other feed but all the turnips they will eat, and nothing or little to drink. They gain flesh fast and are often marketed without "finishing off" with grain, though this is better, especially if the beef has to be driven far or stand a long journey. This practice is said to be better than feeding hay with the turnips.

Beardless Barley.—"M. E. N." There is a two-rowed beardless or bald barley, which has a fair reputation. The Nepaul barley which we received from California and distributed quite extensively is almost beardless and hullless, it has given great satisfaction in many cases we have heard from. There is besides a hullless or naked barley with beard, two-rowed, very good.

A Lesson in Horse-breaking.—Major Winthrop says in John Brent: "I learned to govern horses by the law of love. The relation of friendship once established between man and horse, there is no trouble. All lower beings, unless spoiled by treachery, seek the society of the higher. As man by nature loves God, horses will do all they know for man, if man will only let them. All they need is a slight hint to help their silly, willing brains, and they dash with ardor at their business of galloping a mile a minute, or twenty miles an hour, or leaping a gully, or pulling tonnage. They put so much reckless break-neck frenzy into their attempt to please that he must be brave to go thoroughly with them."

Sorghum Seed.—"J. B." Putnam Co., Ill., inquires, if Sorghum seed does not need renewing every few years, above latitude 40°? Our knowledge of the progress of Sorghum culture, and of the nature of the plant leads to the belief that there is no such need if the seed is properly selected, from well ripened canes which grew at a distance from other fields, which may have been raised from carefully selected seed. Certain it is, there is a great deal of poor seed in the country, but there is also some Sorghum, the seed of which has never been changed, that has maintained its character from the first undeteriorated. It is important to select seed this autumn and not wait till next spring, when one must take what he can get.

Book on Breeding.—"J. S. C." "Goodale's Principles of Breeding" is an excellent practical treatise on this subject, and worthy the careful study of every farmer. This answers your last question, and if you get the book it will answer all the rest.

Sorghum Sugar.—Two beautiful samples of sorghum sugar (from a lot of 300 pounds made by Charles B. Linds of Kansas,) have been placed upon our table by Blymyer, Bates & Day, the manufacturers of Cook's Evaporators, Cincinnati, O., in refutation of a remark in the *Agriculturist* that sorghum sugar "has not a market value so high as the syrups it will make," and that, as it generally occurs, it is "a gummy mass and not marketable." There has never been the slightest doubt in our minds that sorghum juice contained crystallizable sugar; we know that it does, and that it is usually so mixed with grape sugar and other impurities, that, as it has been produced by 99 people in 100, it is a gummy mass lacking in sweetness and neither marketable, nor wanted by the sugar refiners. There is no doubt that as processes are studied and practice perfected the sugar boilers, and as the apparatus is improved, more sugar may be produced: and we certainly hope that we may be able by and by to recommend to our readers, to aim at making sugar rather than syrup, as it is now; almost certain success attends syrup making, so while we urge experimenting, we cannot recommend indiscriminate trying to make sugar, because disappointment would follow.

Sour Sorrel—Sour Soil.—So many of the intelligent correspondents of the *Agriculturist* allude to the presence of *sorrel* as indicating "acid" in the soil, that we must again assure our readers that the two have no connection whatever. Soils which abound in vegetable acid are not the ones on which *sorrel* grows most readily. If by "sour" is meant only harsh, cold, unfriendly to the growth of crops, there is no objection to the use of the word, and so we employ it. Such soils are often wet, contain salts of protoxide of iron and vegetable acids. *Sorrel* and the coarse grasses and sedges grow pretty well on them, and the character both of the soil and its products is changed by deeper plowing and the addition of lime and alkalies (ashes) in liberal quantity. The fallacy of the reasoning we criticize is seen in the fact

that we get the best *Rhubarb* (own cousin to *Sorrel*) on the "sweetest" and mellowest garden soil.

The Use of Fish as Manure.—"G. B. H." Middlesex Co., Conn., writes to the *Agriculturist* that the use of large quantities of White Fish or Moss-bunkers, though at first producing excellent crops, after a while "the soil becomes hard and bakey, the crops steadily diminish, and an acid shows itself (see item on *sorrel*) in greater or less quantities of *sorrel*." He has been successful in remedying these evils "by composting the fish or fish guano with swamp muck, adding 1 peck of lime, or its equivalent of wood ashes, to the load, and a small quantity of gypsum to fix the ammonia." The compost may be very freely used with good results.

Best Floor for Horse Stables.—"G." writes to the *American Agriculturist*: "For horses at all inclined to have tender or contracted hoofs, the best possible floor is one of earth. Remove the planks and joists, throw in a foot or so of stones or broken bricks, for drainage, then finish off with six inches of good clayey soil pounded down firm. Such a floor will never rot or break through, endangering the horse's life or limbs; it will keep his feet soft, and in nearly as healthy a condition as if he were at pasture. Having tried this and seen it tried on horses with tender feet, I can recommend it with confidence." [The only fault with this floor is that the urine, the best part of the manure is chiefly lost.]

Shelter for Sheep at Pasture.—We find a suggestion in one of our exchanges and uncredited, in which there is wisdom. It seems that it has been the practice of Solomon Green of Massachusetts to give his sheep the shelter of small dark buildings put in their pastures, and into which they may go at pleasure. The result is that during the heat of the day they retire into them and remain till about 4 o'clock in the evening. The houses are small and on runners so that by shifting them often the land is thoroughly and evenly manured. This is a good idea for breeders of valuable sheep, who think no labor lost which contributes to their welfare.

Alderney Cows.—"Esther," Steuben Co., N. Y. Good to first rate cows cost from \$200, currency, to \$250 in gold; half bloods or grades which are nearly as good for milk, \$100 to \$200 according to their milking qualities. There are few pure bloods offered for sale now. A few Guernseys and Alderneys, a decidedly inferior lot, were sold at auction in this city a few weeks since at very high prices, to rich city merchants.

How Tobacco is handled in West Virginia.—Theo. Heineman of Marshall Co. writes out his method of treating tobacco, for the readers of the *Agriculturist*. After describing the early culture, hoeing and topping, he says, he keeps it suckered and wormed till it is fit for housing. "Then I begin to strip the bottom leaves off, haul to the house and string them. When the house is full I close the doors and start a fire in the flues,—just enough to keep the house warm, till it turns yellow; then I raise the fire so that it dries it out in 48 hours. If I get the fire too high I throw open the door till it cools off. When it is dried out I let it hang several days until it draws dampness, so that it may be handled without breaking. Then it is taken down and piled in a house for the purpose, until it takes a sweat, when ready to 'hand', hang it again, and when damp enough, hand it and 'bulk it down'; and so it lies till all is 'handed.' It is then hung on sticks and dried out [we suppose by fire-heat] till it is perfectly dry. When it gets damp enough (by exposure to the air) to pack, I place it in hogsheds and press it so as to get 8 to 10 hundred-weight in a hogshed."

Tobacco Worm Moth.—"S. B. W." of Warren Co., O., recommends the flowers of the "James-town weed" or "Jimsen weed" as the best into which to put the poison honey for destroying the Tobacco Sphinx. In the article on tobacco in the *American Agriculturist* last month (page 201) this is the plant mentioned under the more widely known name of *Stramonium*. It is described and figured on page 148 (April). This practice of poisoning the sphinxes is every way recommendable, provided the poisoned honey be put in plucked flowers or those that will wilt when the sun comes upon them.

Aeration of the Soil.—"J. N. C.," Niagara Co., N. Y. The aeration of the soil in connection with drainage takes place on this wise. The air penetrating the soil as low down as the water is drawn off, and being always subject to the law of "diffusion of gases" is always changing. The warm air above the surface contains much moisture; that deep in the soil has, by becoming cool, parted with its moisture to the soil, and has lost its ammonia also, and much of its carbonic acid.

So according to the law of diffusion the air above will constantly be changing places with that below, and the result is a perfect aeration or airing of the soil, with many attendant benefits, as far down as it is drained, and the more pulverized and open the soil is the better.

Planting Acorns.—J. H. Graves, Eagle County, Ill., planted last autumn a quantity of acorns, but did not succeed in getting oaks. They were probably planted too deep, as they are naturally sown just under the covering of fallen leaves. In this country the raising of oaks from seed has been so little practised that we are without much reliable information upon the subject. All our writers copy from the English. In England they gather the acorns and dry them in the sun, and then pack them with three times their bulk of sand, keeping them safe from vermin in a cellar. They are sown in the spring in drills, setting the acorns at about two inches apart, if grown in the nursery, and covering $\frac{1}{2}$ to 1 $\frac{1}{2}$ inches, according to size. Some prefer to plant, where the tree is to stand, 4 or 5 acorns in a hill, and gradually thin out all but one. To grow oaks successfully, the young plants should be protected for the first few years by other plants. Birches or Larch may be sown for the purpose, or some of our pines which grow very readily from seed. In England they allow the pines to grow first and when they are 4 or 5 feet high, the oaks are sown under their shelter. As the oaks grow, the nurse trees, as they are called, are gradually thinned out and the wood from these pays the expense of planting.

Fence Posts.—"Subscriber" asks, will oak or cedar make the most durable fence posts? We take it he means white oak and red cedar. We think the cedar will last much the longer, but it is quite impossible to tell how long either will last, so much depends upon the character of the soil.

Condensed Milk, etc.—James Reid, Vicksburg, Miss. Condensed milk cannot be prepared in families, as it requires expensive machinery worked by steam power, and costing many thousands of dollars. The putting up of meats is a regular trade, and we cannot give any process which can be practised in the small way. The chicken, etc., is first put into cans and soldered up, leaving a small hole in the cover; the whole is then thoroughly cooked in boiling water, all air being expelled; then the hole is closed with a drop of solder.

Gapes.—How to find a Chicken's Windpipe.—"X", who wrote to the *American Agriculturist* from Baltimore Co., Md. (p. 204), thinks people will not find the chicken's windpipe unless they are told that, "the opening to it is a slit through the root of the tongue, which is entirely closed except when the chicken is inhaling or exhaling breath. The feather must be thrust down this opening and not down the throat."

Ashes for the Curl in Peach Trees. C. F. Raynard, Fairfield Co., Conn., has successfully cured the curl and killed the aphids which causes, or at least accompanies it, by sprinkling coal ashes over the foliage. The use of ashes around the trunks of the trees has been frequently noticed in this journal.

Pruning Peach Trees.—"A Boy," DeKalb Co., Ill. It is customary to cut back the previous year's growth one-half or one-third in February or early spring. If regularly followed off young trees it will keep them in good shape and increase their fruitfulness.

The Peach on Plum Stocks.—W. G. Kent, Lee Co., Iowa. By budding on the plum stock the peach is somewhat dwarfed and is thought to be made more hardy. The plum roots flourish better in cold wet soils than do those of the peach, and in England this mode of propagating is very generally followed.

How to Clean Carrot Seed.—The question asked through "the Basket" some time since is thus answered in a note to the *Agriculturist* by L. T. Robbins of Plymouth:—"I put them into a tub of water and rub them hard, [between the hands we suppose,] this takes off all the burrs, which, with all the light poor seed will rise to the top and may be turned off, while the good seed will sink to the bottom. This I spread out in the sun till dry, and put up for use."

"Bugs" in Peas.—Mrs. J. M. Corunna, Ind. The cause of the bugs in peas is a beetle which lays its eggs in the green pea, this egg hatches into a grub which finally turns into a beetle. The insects may be killed by scalding the peas before sowing them. It is probable that these insects damaged the peas before planting, so as to injure the germs, though this is not usual.

Trouble with Currant Bushes.—"E. G.", Norwich, Conn., has experienced nearly a total failure by the dropping of the fruit. Examine the branches by splitting them longitudinally and see if the borer has not been at work. If he is still there prune severely and burn the cuttings. Start new bushes from cuttings this autumn.

General Fruit Book—How to recognize Fruits.—Many inquire after a book, which will enable them to name fruit will find Downing's *Fruits and Fruit Trees of America* the best work. It contains descriptions of all the standard varieties and has figures of most of them. See book list.

Grape Questions, Pruning, etc.—"C. L." Fuller's *Grape Culturist* is the best treatise upon the general management of the vine yet issued in this country. See our book list.

An unfruitful Peach Tree.—D. E. Oswald has a thrifty peach tree which blossoms but has never borne a peach. The flower sent had its pistil so badly malformed that it could not develop into fruit. If the blossoms are all like the specimen, nothing can be done for the tree.

Ants on Pear Trees.—Eudora Stone, Foxlow, Mass. Tarréd paper, or paper smeared with an ointment of rosin and lard, and bound around the trunk will probably keep the ants from ascending the trees.

The Currant Worm.—S. Edward Todd states in the *Country Gentleman* that he has found that the currant worm could be destroyed by dusting the bushes with the powder of White Hellebore, which is sold at the drug stores. Make a note of this for trial next year.

Smut in Onions.—A gentleman from Southport, Connecticut, has shown us specimens of young onions, the leaves of which were filled with a black powder having every appearance of the smut which affects corn. It attacks the plants when quite young, and soon kills them. Large fields have been destroyed, and unless some means can be found of checking the evil, the cultivation of the onion, in that section, will have to be abandoned. A free application of salt to the plants, while young, and a solution of copperas were suggested as experiments. If any readers have successfully treated this disease, their experience should be given for the benefit of others.

The Onion Grub.—If any of the readers of the *Agriculturist* have successfully combatted the attacks of this insect they will please communicate their experience for the benefit of others.

Propagation of Grapes and Roses.—"H. L.", Dayton, Ohio. Fuller's *Grape Culturist* gives minute directions for growing the grape from cuttings by heat. We know of two cases in which persons, quite inexperienced, have succeeded perfectly by following his book to the letter. Roses may be propagated by making cuttings in the fall about 8 inches long, keeping them in sand in a cellar or green-house over winter, when they will callus, and then planting out in spring. Free growing kinds may have cuttings taken of the new growth after it is mature, and put in sandy soil under a shaded frame and kept moist and close.

Renovating an Asparagus Bed.—"E. G.", Norwich, Conn., has an asparagus-bed which has been neglected and yields poorly. Give manure now, and a thick covering of it over the bed in autumn. Next spring sow seed and prepare for a new bed to replace the worn out one.

Sweet Basil.—W. A. Block. This is an aromatic herb and is much more prized in Europe than in this country. It is used in soups, stews and salads, to which it imparts its peculiar flavor, somewhat resembling that of cloves. It is annual, cut in flower, and dry.

The Cranberry Tree again.—E. Holmes, of Kennebec Co., Me., puts in a protest against our statement that this shrub is "quite worthless for its fruit." He has eaten it in the wilds of Maine when it was a great luxury with his salt pork and hard-tack. Mr. H. is right, and we are right. In travelling through unsettled countries (and we have had our experience of Aroostook Co. and Mt. Katahdin with an additional three years more in the wilds of Texas and Northern Mexico), we know that any thing seems good, simply by contrast. But we are writing for civilized people and we maintain that the Tree Cranberry is not worth cultivating for its fruit, because there are many better things. On another page

we mention that we have eaten purslane and thought it good; but we don't recommend the cultivation of purslane as long as we can grow spinach. Having had our say, we quote the conclusion of Mr. Holmes very pleasant letter: "The berries, where not exposed to the ravages of birds and the thrashings of high winds, will remain on the bushes until next May, and thus make a beautiful winter ornament. After they have been frosted severely the 'bitterness' of which you complained is destroyed and the acid is more mild and agreeable. The berries may be then cooked and passed through a colander, to separate the pulp from the seeds, and used for sauce, or pies, in addition to other fixings. A very pleasant juice resembling cider may be expressed from the thawed berries in winter. I have never known any gathered and laid down as preserves as are other small fruits, because they preserve themselves all winter on the bush, when growing in situations above named. Now I don't believe you would knowingly, or willingly injure or abuse even a cranberry bush. I hope you will retract your accusation of its 'being worthless for its fruit' and allow that it is both beautiful and useful whether for flower or fruit and worthy of cultivation for its many merits."

Treatment of Bulbs.—"A subscriber," Noblesville, Ind. *Gladiolus*, *Tigrida* and *Tuberose* are to be taken up as soon as the frost kills their leaves. With *Oxalis* Deppil there will be found several bulbs or buds at the top of the root, which keep in dry sand.

"Verbena montana," etc.—There has been much talk about this, and it has been noticed in some journals as a new, fine, and hardy Verbena from the Rocky Mountains. This summer dried specimens have been received, and were determined to be the old *Verbena aubletia*, an opinion which has been corroborated by the highest botanical authority in this country and also by one of the most distinguished florists of England. *Verbena aubletia* is found wild in Illinois and southward. In comparison with our garden sorts, it is a coarse plant, and though it is not unworthy of cultivation, it ought to stand in its proper name and on its own merits. There has of late been a persistent attempt to bring forward common native plants under unfamiliar names; these have high colored descriptions, and many who buy plants or seeds from these will be sadly disappointed. Our readers need not be told that we advocate the cultivation of every American plant worthy of a place in the garden, its native origin being to us an additional recommendation. But we do object to introducing under the name of "Prairie Flowers" and "Rocky Mountain Plants" a lot of worthless trash. Last season one of our principal seedsmen published in his catalogue a list of plants from the prairies under their botanical names. We saw at a glance that the majority of these seeds were those of vile weeds, and informed the dealer, who very properly suppressed the list. There may be some desirable things offered in this way, but there is so much of either ignorance or humbug mixed with it that we must advise our readers to beware of American novelties, until they can learn that they have been properly tested.

Gazania splendens, etc.—"J. S.", Brunswick, Me. This is not a hardy plant. Downing's mulberry originated at Newburgh, N. Y., and is perfectly hardy there, where they have quite severe winter.

Humbugs—"Howard Association."

—Several persons have from time to time written us, that we were wrong in denouncing this and that advertising "Doctor," "Medicine," etc., each one of the writers claiming to have experienced or seen remarkable cures by some one of these "doctors" or medicines. In most cases, doubtless, the persons thus writing are the employed agents of the parties in whose behalf they write. But in some cases, at least, they speak candidly. Many persons imagine themselves "cured" of a distressing disease, which was only an imaginary, or very slight one at first. Nine-tenths of all the cancer and other remarkable "cures" are merely natural recoveries from supposed terrible maladies. A stimulant in a medicine has made one feel well for the time being, and the medicine has been lauded to the skies as the curing agent.

Cooking in Summer.—Have those of the many readers of the *Agriculturist*, who live in towns and villages where gas is used, ever tried, a gas stove? Gas, as ordinarily burned to produce light, will smoke any vessel placed over it to be heated. In a gas stove the gas is first mixed with air, and then it burns with a flame which gives but little light, but a great deal of heat, and the combustion is so complete, that no smoke is produced. In preparing meals in summer, all that is required is heat enough to boil a teakettleful of water and cook some simple dish. To build a fire to do this, makes a great waste of fuel, besides heating the apartment uncomfortably. In a gas stove the fire is kindled

in an instant, and as soon as it has performed its office, it is extinguished by the turn of a stop-cock. For preparing breakfast and tea a small gas stove will be found wonderfully convenient, if not economical. Those who live where gas is not supplied, will be glad to know that the inventions for using kerosene or coal oil are assuming a practical shape. We have recently tried one of these kerosene-stoves, of the kind advertised in our columns, and found that, reckoning the oil at the highest price, we could boil a gallon of water for less than two cents' worth of fuel. The apparatus was perfectly new, and there is no doubt that subsequent experiments will show a lower cost. The same stove is calculated for frying, stewing and other small culinary operations. Doubtless there are many families who are so situated that they would find an article of this kind economical; but with an equal cost with other fuel, the ease with which it is managed, and the ability to cook without overheating the room, will commend the kerosene-stove to the attention of hundreds.

To Polish Patent Leather about Carriages, etc.—W. C. Hart, Orange Co., N. Y., writes to the *American Agriculturist* as follows: "The 'dash' and bodies of wagons covered with patent leather, and parts of harness of the same, as the blinders, saddle, etc., may be polished by taking sweet oil and applying it with a soft piece of muslin; after well oiling let it remain for a few hours, then take a piece of muslin that is soft and pliable, and polish by rubbing. It will look as well as new, and well repay the trouble.

Coffee Mixtures and Substitutes.—Hundreds of these are in the market, many of them worthless—not a few deleterious, and none of them equal to the real article. The latter however has reached such a price that a palatable and wholesome substitute is desirable in many families. The London Club Coffee contains a portion of the pure Java, and having been made acquainted with its entire composition, we can say the additions are not hurtful. The flavor is agreeable, superior to that of samples sold as pure coffee, roasted and ground.

Surface Signs of Water.—"H. E. P.", Passaic Co., N. J. There are no signs that indicate surely where water may be found in many places. Still there are some external evidences of water which may be observed with advantage in locating wells. For instance where the water comes out all along on a hill-side it is highly probable that a well dug higher up on the hill will strike water when it comes to the level of the springy places or before. A knowledge of the geological structure of the country furnishes the only means of judging, and this would fall to be a good practical guide in many cases.

To render Surface Waters wholesome.—"E. J. J.", of Geneva Co., N. Y., writes to the *American Agriculturist* that 40 years' experience confirms him in the opinion that boiling surface water, and allowing it to cool before drinking will thoroughly rid it of any injurious miasmatic, or other effects, so that it will no longer cause diarrhoea, dysentery and similar complaints. Our own experience is similar. Boiling frees water from many impurities, which fact is well known to our soldiers.

Insects to be named.—J. L. Albrecht. The cocoon is that of the Cecropia moth, *Attacus Cecropia*. The caterpillar lives on fruit trees. We know of no attempts to utilize the silk.... R. D. Weeks, Essex Co., N. J., sends *Galeruca duodecimpunctata*, the 12-spotted *Galeruca*. It is own brother to the striped bug, and even more destructive than that pest, as it will attack full-grown leaves of squash vines and rapidly destroy them. We have never seen them in very large numbers, and cleared the vines of them by catching them early in the morning. The insect is of the size and shape of a large Lady-bug, of a dull yellow color with 12 black spots.

Plants for Names.—Lucy Wilson, Flagstaff, Somerset Co., Me., sends a leaf of what appears to be the Day-lily. It is a *Funkia* of some kind. The white-flowered one is *F. subcordata*, and the blue or violet one is *F. ovata*. Both are hardy garden perennials of the easiest culture. Miss W. also sends a wild plant, the *Cassandra calyculata*, or Leather-leaf. It is one of the prettiest small shrubs of our northern bogs. Its buds are largely developed in autumn, and if gathered any time in winter and put in a glass of water in a warm room its beautiful white bell-shaped flowers will soon open..... Mrs. J. A. Walter, sends a strawberry from Utah that is so much crushed we cannot identify it.... A. Hulsey, LaSalle Co., Ill., sends a *Clematis*. We cannot determine whether it is *C. Viorna*, or *C. Pitcheri*, from the specimen. Send the fruit.... "E. C. H.", Mt. Kisco, N. Y.,

sends the common Juniper, *Juniperus communis*... D. T. Marston, sends from Camp near Newbern, N. C., *Passiflora incarnata*, one of our native Passion-Flowers. It is very pretty as a garden climber, and the roots endure the winter around New-York city... I. N. Kanaga, specimen broken up—but appears to be *Stylophorum diphyl-lum*, the Celandine Poppy... "C. B. S.", Waushara Co., Wis., sends *Castilleja coccinea*, the common Painted-cup.

Crop Prospects.

Reports now coming in from all parts of the country indicate on the whole favorable harvests. From some sections the accounts are glowing—people being hardly able to estimate the great yield of wheat and oats. This is true of parts of Pennsylvania at any rate, and good crops are reported from Maryland, and West Virginia. Throughout Ohio, Indiana and Kentucky the wheat has suffered "in streaks" from drouth, and in some counties the estimates are of $\frac{1}{2}$ to $\frac{3}{4}$ of a crop. In some places the winter wheat was much hurt by the frost and subsequently the drouth nearly finished it.

The rains in June came just in time to save the oats and other spring grain—and in many sections they filled well. There are few complaints of either rust or fly; though there are some serious ones.

Our correspondents in Michigan represented very severe drouth in June followed by a hard frost "adding death to desolation." These reports were followed by others chronicling abundant rains. Similar reports come from the Far West, Wisconsin, Iowa, Minnesota, the rains however coming in time to add half to two-thirds to the value of the crops. The Monthly Bulletin of the Department of Agriculture last month estimated two-thirds of a crop of wheat the country through.

In this State and New Jersey, agricultural prospects were fair throughout, until within the past month, and rains coming soon would retrieve the falling fortunes of the farmers. Corn is just beginning to suffer. So with fruit, though blackberries and raspberries are drying on the vines. We get very bad reports from the hop growers: mildew and aphid add their blight to other unfavorable circumstances, and more than half a crop can hardly be anticipated. A fair crop of hay was well secured (not damaged by rain, at least). In New England, rye generally turned out pretty well, and as to corn and hay the same remarks apply. So far (up to the 16th of July). In our opinion, we may count upon but little less than an average yield of farm produce generally; though a continuation of the drouth a few days longer will make serious differences. The damage is already great.

Sundry Humbugs—J. H. Tuttle.

Many readers of the *Agriculturist*, who have received letters from J. H. Tuttle, announcing that he had a package at Tuttle's Corners, which would be sent on receipt of 35 cents (modest Tuttle), will be interested in the following notice. It is from the "United States Mail," a paper devoted to Post Office matters and published under the sanction of the Post-Master General—

"TUTTLE'S CORNERS."—Look out for swindling circulars dated at Tuttle's Corners, N. J., stating that one J. H. Tuttle of that place, has a sealed package for the individual to whom the circular is sent, which he will forward on the receipt of a specified sum. The "sealed package" (sealed by the ingenious J. H. T. himself) consists of a trashy book, not worth 5 cents, and the whole operation is the scheme of a rascal too lazy to earn an honest living. There is now no post office called Tuttle's Corners,—it having been discontinued in April last by the Postmaster General.

The Post Office Department will not allow of any abuses which it can prevent, and if our readers suspect their postmaster of any complicity with the circulars with which the country is flooded (some of them even slipped into our own paper), they should show him this notice and inform him that there will be a detective after him.

Since Tuttle's Corners were broken up, J. H. T. has removed to New York City, where he will have a wider field of operations, than at the "Corners," provided the P. O. detectives don't catch him. It may interest our friends in the country to know that many of these swindlers who operate through the post office, and ask their victims to direct to such a street and number, often use the direction of honest people and wait daily upon the side-walk for the letter-carrier. They have "a name" but no "local habitation." Some furnish the carriers with lists of the several aliases to which they have letters directed. Look out for all unknown correspondents.

The schemes, to transfer money from one pocket to another, of Hammett & Co., and Egerton & Co., of this city, have been sent us by several readers. The special agent of the P. O. department informs us in writing, that these people have no boxes in the general post office of this city. You—the reader—are a sensible person. If you could make in some way \$10 or \$100 a day would you advertise to sell your secret for 50 cents or a dollar?

Could you transmute base metals to gold, would you sell your secret for \$1, or would you not make all the gold you needed yourself first, and dispose of the "secret" afterwards? Cannot the readers of the *Agriculturist* give us credit for all our previous teaching and consider themselves humbug-proof?—Let quack doctors, lottery and gift enterprise dealers, Mr. Dr. Freeman, and the whole horde of gold transmuters, swindling gold mining, tea, and other companies, humbug express parcel senders, and the whole crew of thieves, cheats and swindlers know that whoever takes the *Agriculturist* is not to be caught in any trap of the kind, be it ever so nicely baited. Let every head of a family and every teacher warn the young against all swindlers who offer more than a dollar's worth for a dollar, no matter in what paper he advertises, or in how cunning a guise he may come.

The Care of Our Sick and Wounded.

THIRD LETTER FROM MR. JUDD.

CITY POINT, Va., (on James River,) July 2, 1864.

My stay among the wounded, designed for a week or two at first, has now extended to nine weeks, and I can hardly yet leave the good work, though duty to our large family of readers, and business correspondence, will impel me to soon leave this field to others. Hundreds of noble spirits have come and worked, and returned worn out; a kind Providence has thus far preserved me in remarkably good health. Our wounded men are fast decreasing in number, the terrible, hot, dry weather, is in a measure suspending active fighting, and just now we are turning our chief energies to securing the health of our men at the front. For a week past, I have been at the front lines around Petersburg, aiding in distributing pickles, vegetables, etc., in the trenches, and a world of good is being done. Said Gen. Smith to me a week since, "The sick and wounded in the hospitals are comparatively happy and well taken care of; an onion or pickle or two, or some fresh potatoes given to a man in yonder trenches may improve his digestion, recruit his health, and thus save us an efficient soldier, and you the care of an extra man in the hospitals." This remark, which was confirmed by other Corps Commanders, Gens. Burnside, Hancock, and Warren, led to still greater exertions on the part of the Sanitary Commission, to supply fresh vegetables, pickles, etc., to the men at the front. I am now waiting the loading up of a long train of wagons with which we shall go out to the trenches, and as I shall be more exposed to danger than hitherto, I merely write this closing note upon the labors of the past two months.

Following the army movements, we left White House, where my last letter was dated, and came round to this point, 100 miles up the James at the mouth of the Appomattox river. Our labors here have been arduous. About 8,000 wounded and sick men have been brought back from the front around Petersburg, and placed in tents on high ground on the south bank of the Appomattox, 1½ miles from here. (See H. on map.) Hospital boats, to carry them North, have occupied the only available landing on the Appomattox, so that our boats have necessarily remained here. The Sanitary Agents have had 8 tents established among the hospitals, and a large force of men going among the wounded, giving the same care that I described in my previous letter. The comforts afforded, the suffering alleviated, the lives saved by these deeds, are not to be reckoned in figures. Here, too, the work of the Commission has alone repaid all that has been done or may be done to supply funds to its officers.

I rejoice that I came hither. The memory of the past two months will be the brightest spot in my life. Others are coming to take the places of such of us as are compelled to leave, by business or want of health, and they will enjoy the work. I have met many a noble companion—old school-mates—men of wealth leaving their comfortable homes, and working here night and day—ministers—college professors—indeed men from all ranks. As we meet hereafter we shall refer to these days with pleasure. I have not time or room to speak individually of the laborious officers of the Commission upon whom has devolved the responsibility of forwarding supplies, and managing the distribution—of Dr. Douglass, Chief Inspector, of Major Frank B. Fay, Chief of the Auxiliary Relief Corps, of Dr. Smith, Dr. Parish, Dr. Steiner, Dr. Fairchild, Messrs. Anderson, Williams, Johnson, Mossman, Clappitt, De Bosc, Evans, Doollittle, and a host of earnest and laborious clerks and assistants; of Drs. Agnew, Johnson, and Knapp, Messrs. Strong, Bowne, Hovey, Cauldwell, and many others who are engaged at different points, gathering and forwarding supplies, etc. Their good works will follow them: I must not forget my good friends Mr. and Mrs. Holstein, who left a comfortable home in Pennsylvania, and are giving their whole time to the care of the sick and wounded. How many thousands will remember the cups of coffee,

lemonade, punch, etc., and the food prepared by their own hands, given out by Mrs. Holstein and her niece.

—I ought here to name hundreds of others also, as friends Bradish, Hyde, Sperry, Brooks, Dennison, Light-hight, Le Baron, Potter, "Uncle John" Vassar, etc., but have neither time nor space. War is awful at best, but no previous war was ever so shorn of its horrors, as that now waging. To all who have helped by work or money contributions to aid the soldiers, I desire in the name and behalf of tens of thousands of wounded and sick, to offer you their warmest and most heartfelt thanks, as I do for myself, also, because of the means you gave, through which I, as one of the workers, have been able to do and enjoy so much during the past two months.

ORANGE JUDD.

P. S.—The U. S. Sanitary Commission have expended in their labors during the past two months \$523,000! and I can well understand how the money has been used. Here are a few of the Sanitary things we have just distributed to the fighting men at the front, to keep them well: Canned tomatoes, 207,166 pounds (over 103 tons); canned fruit, 15,000 pounds; canned jellies, 574 pounds; pickled cucumbers, 36,373 gallons (about 1,300 barrels); pickled onions, 13,344 gallons; pickled tomatoes, 4,719 gallons; curried cabbage, 1,166 gallons; sauerkraut, 16,218 gallons; fresh onions, 100 barrels; potatoes, 70 barrels; dried apples, 242 barrels; other dried fruit, 39 barrels; lemons, 301 boxes; portable lemonade, 2,400 boxes, oranges, 25 boxes; etc.

O. J.

Notes from the Battle Field.

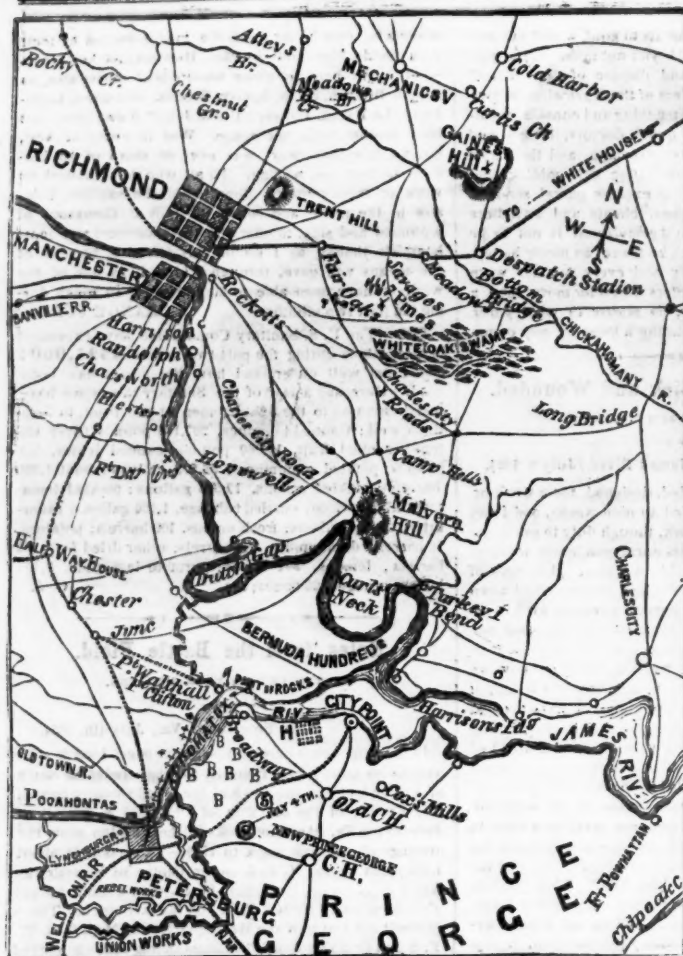
FOURTH LETTER FROM MR. JUDD.

Near Petersburg, Va., July 4th, 1864.*

In the map sketch herewith [see next page] I mark with a circle the point where I now sit writing—under the shade of a large tree—on the lawn of the noted Country Seat of Mr. Friend, of the old firm of "Friend & Scott," of Petersburg, Va. Account books in the Mansion show the dealings of the firm back to 1799.—This point is about 4,400 yards North N. E. from the centre of Petersburg, which is in so full view, that I can, with a small pocket glass now read 3 o'clock P. M., on the city clock. These grounds are just now the Headquarters of Maj. Gen. W. F. Smith ("Baldy Smith"), Commanding 18th and part of 10th Army Corps. The location is a very commanding one. From where I sit I can plainly see our advanced lines of earth-works in the valley, 1½ miles toward the city, stretching from the Appomattox river, eastward, then in a zigzag course around the city to the south. There are few trees in the valley or plain between this point and the city, while to the left and most of the way round, the lines are in the woods or hidden by groves. The enemy's lines lie just beyond our own. Without actually seeing them, one can form little idea of the immensity of these earthworks. The front line consists of a continuous bank of earth thrown up, very zigzag in its course, and extending five or six miles. At brief intervals are Lunettes or Forts with embrasures for cannon. Every available knoll or high ridge, or point of land, is taken advantage of for batteries; and every creek, valley, or low spot furnishes a shelter where the men may encamp under small tents, cook, eat, sleep, etc., and be ready at a moment's warning to meet an attack upon the front, and to exchange places with (relieve) those in the front trenches or works. On both sides, sharpshooters, stationed in trees and other hidden spots, are ever on the lookout to pick off any one who for a moment exposes any part of his body in sight. (I had a rather close intimation that one of them saw me nearly a mile off.) Not a minute passes during any day when one can not hear the cracking of their rifles, and if near enough the shrill whistle of the bullet through the air; while at night the advanced lines of pickets or skirmishers keep up an incessant firing as if to let each other know they are there and awake. I have slept at this point (or tried to) five different nights, and seldom counted less than 35 to 50 muskets fired in a minute, in the woods at the left of me. The other evening the firing increased from fifty to a hundred per minute, then faster, then suddenly burst out into a continuous roll, which sounded like a hundred bunches of great fire crackers set off in as many empty hogheads. This continued for 25 or 30 minutes, with cannon and mortars chiming in every few seconds. I could only hear the noise and see the flashes above the woods; ignorance of what was the na-

* Since the above date Mr. Judd returned very unexpectedly. His exertions to supply the men in the trenches with Sanitary stores, added to his previous labors, and the intense heat, brought on a prostrating disease which has confined him to his bed since his arrival home. For some days his illness threatened to be serious, but the readers of the *Agriculturist* will be glad to hear that he is improving at the time we go to press. This statement will explain why many business, personal and other letters still remain unanswered.

ASSOCIATE EDITORS.



MAP OF THE VICINITY OF PETERSBURG AND RICHMOND—JULY 4TH, 1864.

ture of the conflict, only made the scene more thrilling. Presently all was as quiet and calm as death. I have only learned that with all this din, and the firing of tens of thousands of bullets, there were but few casualties on our side.—Day and night, cannons and mortars are "exchanging" compliments frequently.

I have spoken only of the front line of works. Back of these is another line, where many of the troops remain, except when called into action. In front of the advanced line, pickets, or skirmishers are thrown out several rods, or hundreds of feet where the nature of the ground prevents the opposing lines from coming very near each other. These men lie crouched behind little banks of earth, or in holes dug in the ground (called "gopher holes," and they remain here to give warning of the approach of any considerable force of the enemy. They must keep carefully concealed, especially by day, casting only stealthy but watchful glances at the enemy, though the pickets frequently agree not to fire upon each other, and then they sometimes chat freely, and trade tobacco, coffee, etc., by throwing these articles over into each other's holes. The whole country for 4 miles around Petersburg, is literally full of fortifications or lines of earthworks, built by the enemy prior to our arrival. Two strong lines of these are outside of where I now sit. It is yet a marvel to me, how our troops advanced so far toward the city. It would seem as if a few thousand men behind these embankments, all of which have a clear sweep of open ground before them, could have resisted the approach of an immense army. I have seen no other spot in my life, in this country or Europe, which will so well repay a visit immediately after the war is over, as the region a mile or two north and east, and four or five miles south of this point—including the ground within and up to the city.

This hill affords the finest view imaginable, night or day, for one who has the curiosity to see the actual work of investing a city, and whose nerves are not too weak to allow him to listen to bullets, shells and cannon balls flying in front of and around him, and sometime in pretty close proximity. One, however, soon gets used to these things. I have been forward in the trenches several days, distributing pickles, pickled onions, lemons, canned tomatoes, fresh potatoes and onions, etc., which the Sanitary Commission is now sending forward in large quantities to the exposed fighting men—and with a delight

washed out. No special thanks to the sender, if he meant it for me—I prefer softer compliments, as a rule.)

The reader will please come in imagination and sit with me at this point, and let us glance over the surrounding scenery on this 4th of July afternoon. Yonder, in the southwest, is Petersburg, which appears quite near, as we look over the lower and intervening. The Appomattox coming out from the town, runs by us on the west. Its banks are wooded, but on the high ground on the other side are plenty of the enemy's cannon pointing out towards us, through embrasures in earth-works. Many of these are partly hidden by woods, but others are readily seen. (They are indicated on the map.) Away up, apparently near the city, heavy embankments stretch across the plain before us. We see some of our men moving about, but most of them are down in holes in the embankment, and in ditches cut out; otherwise they would be picked off by sharpshooters who occupy the woody opposite bank of the narrow river, and they are also exposed to an enfilading fire from those frowning batteries on yonder bank, just described. Just beyond our front line we see a parallel line of bushes, which cover the enemy's advanced works. Back this way is our second line on lower ground. The only way to reach these lines safely, is to go up through the deep railroad cut, or by a round-about way from the left, along a brook. The relieving of the men, the carrying in of provisions, etc., is mainly done during the darkness of night.

Looking to the left of Petersburg, we see little but woods into and through which our lines extend, coming up toward us, on the left, and then bending south. In a hollow just about south of us, a hundred rods off, is an encampment of our men in reserve. The 2,000 or 3,000 men here, is the largest portion of our great army to be observed at any one point. A new comer here was quite disappointed in not seeing the two great armies arrayed in full view. Farther around to our left, southeast, is high land, partly wooded, and cut up with the enemy's original lines, from which they were driven June 16 and 17.

Turning to the west we see our own batteries (fronted by banks of earth,) beginning where our front line touches the river and scattering along up the bank northward for two miles or more, and mostly on lower ground than our point of observation, so that we look down into them and see all their operations, as well as those of the enemy on the higher opposite bank. Just against us, on the riv-

er, is a mortar battery sunk quite below the surface in a large pit, to be out of the reach of sharpshooters. Every now and then a bomb shell rises out of this, goes far up into the air, curves over to the southwest, and falls exploding near the enemy's railway station, opposite to and down the river a little from Petersburg.—The places of some of these batteries are indicated by B, B, B, on the sketch. [In copying the sketch the engraver has placed these letters, also Battery No. 5, and Mr. Judd's place of observation, all too far toward City Point. Battery 5 is one-third the direct distance from Petersburg to City Point.]

Several batteries about north of us, are on high plots of ground, nearly on a level both with Petersburg, and with the batteries across the river. Twice I have chanced to see nearly all these batteries in full play. First the enemy over the river opened upon the rear of our men in the trenches. In a moment all the batteries, B, B, B, etc., began hurling shells upon them. The firing was, to me, marvelous. Almost every shell, a dozen or twenty a minute, appeared to burst right in or over the offending batteries. They turned their guns upon us, but in less than an hour every one sunk into silence, and not a man was to be seen around them. Few better opportunities ever occur to witness, close at hand, an actual duel between a large number of heavy guns.

At night, the view from this point is sometimes magnificent. Over the plain may be seen shells from mortars and cannon cutting the air in all directions. Now one seems coming directly to you, but it passes to the right or left toward some of our works, and bursts with a loud crash apparently behind you. Sometimes there is almost total silence for several hours, save the picket firing southward, when as if by concert a thunder and crash of cannon and exploding shells, and the meteor-like trail of fuse-shell through the air, fairly light up the whole scene. An hour afterward all is quiet again.

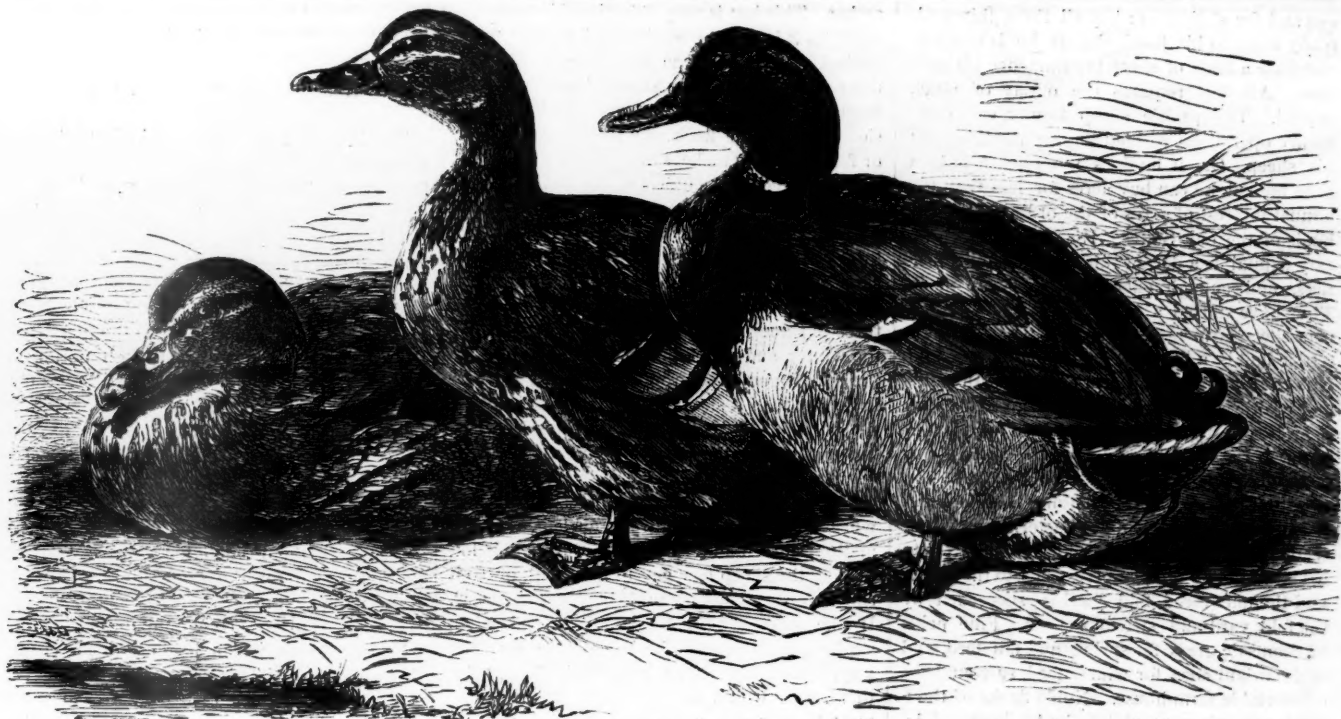
There are comparatively few shells thrown into the city, though, if so disposed, our numerous batteries around it could tear it in pieces, or burn it to the ground at any hour. I believe, the orders are to fire frequently at the Railroad Station and bridge, and to drop an occasional shell or ball here and there, just to prevent the city being used as a too convenient military encampment by the enemy. This is done from three or four points, and especially by Battery No. 5, just north of us, which is called the "Petersburg Express," from the fact that it sends regularly into the city, every quarter hour, night and day, an express dispatch in the form of a 20-pound Parrot percussion shell. (I noticed that to fire this distance, 4,800 yards, they elevate the cannon 15½°, as the ball goes in a curve, and use 3½ lbs. of powder for the 30 lb. shell. It takes 20 seconds to reach the city. The report of the explosion is heard in twelve seconds after its light is seen.) At noon to-day, the "National Salute" consisted of 34 of these missiles sent in rapid succession to the Petersburg Railroad office.

Before closing, I must say one word for our men. I have been much among them for a week past, visited them in their camps, trenches, forts, and in their "holes" in the ground, and a more cheerful, courageous, hopeful set of men never existed. They have all confidence and patience. They expect to win, and intend to—and there are a great many more of them, than is generally supposed, as I happen to know from having helped distribute hundreds of barrels of pickles, fresh vegetables, etc., and estimate how they were to be supplied. Some idea of the vastness of our army may be gathered from a remark of Gen. Grant, when we stated that we had 800 barrels of pickles ready at one time, which would give a large supply to each man. Said he: "This little family of ours will carry the 800 barrels all off in their pockets," and on a calculation, we found this was no joke, but a fact.

I may add here, that I see our losses greatly magnified in some of the Northern papers. I have been with all the wounded who have been sent to the rear since the army crossed the Rapidan two months ago. During all that time our loss in men actually killed, and those maimed for life, will not exceed the loss of the allied armies in a single day at the battle of Waterloo.

The Map, in addition to what is above described, gives an outline of the surrounding country. There is Cold Harbor on the northeast, from which the army swung around by the way of Long Bridge, and crossed the James near Fort Powhatan. At City Point is the great base of supplies. The James river is nearly a mile wide here. The landing for Bermuda Hundreds is just opposite. I have often counted over 200 steamboats and barges strung along the river at and in sight of City Point, above and below. Monitors and other gunboats in large numbers lie all along the James river, clear up to Dutch Gap, and up the Appomattox river, nearly to Fort Clifton. Bermuda Hundreds in which I include a large peninsula, inclosed by two bends of the James river, is occupied by our forces out to the lines of the fortifications drawn across from river to river. A high signal station at Point of Rocks gave me a splendid view of all the surrounding country for a great distance.

O. J.



A TRIO OF ROUEN DUCKS.—Engraved for the American Agriculturist.

Domestic Ducks.

There is a prevalent belief among farmers that ducks are not profitable poultry. This arises naturally from several causes. The habits of indolence which some possess—the tendency not to hunt their food, but to depend upon being fed and the scraps which they pick up about the house—lead farmers to contrast them unfavorably with the wandering turkeys, which find their living and rear their young often in the woods, depending only in winter upon the farmer for their food; and scarcely less favorably with dunghill fowls, which during the summer months require but little food except what they hunt for about the farm. The ducks, besides, though some kinds are excellent layers, are heedless birds, exposing themselves, their eggs and young to crows, rats, turtles, and other vermin, dropping their eggs about, shifting their place of laying if disturbed, inconstant as sitters, and chilling their young by taking them too soon, and too often to the water. Still all these objections may be obviated, in a measure, and ducks really pay very well both in flesh and eggs for the amount of food they consume.

The duck is an omnivorous animal—eating almost every thing vegetable and animal that comes in its way. Insects of all kinds, worms, polliwogs, fish, shellfish (dead or alive,) meat, even that which is partly decomposed, and many green vegetables, grass, seeds, grain, etc. Withal, its appetite is voracious, hence it grows rapidly and fattens easily. The common tame duck is supposed to have descended from the wild Mallard duck, *Anas boschas*, common to this country and Europe. It breeds freely with this species, and also with several other species of wild duck; in some cases the progeny is capable of reproduction of its kind, in others mule-birds or “mongrels” result. The fact that a very different class of birds is produced where the Mallards are crossed with other species and where the common duck is so crossed, with other points of difference, throws some doubt on the assertion that the Mallard is the parent of our common ducks. Besides, efforts to domesticate

the Mallard have not been successful as a general thing. We have, however, many wild ducks capable of perfect domestication, and the experiment ought to be well tried with all, for thus our stock of domestic poultry may be essentially increased and improved.

The engraving represents a trio of “Rouen” ducks, of great beauty. This breed is the most highly esteemed of all domestic ducks, by many duck breeders. Its habits are quiet, and so it does not wander about and get lost, as ducks often do. It attains a great weight, and is unsurpassed as a layer. An English writer reports that he has frequently known a pair of young drakes 9 or 10 weeks old to weigh 12 lbs. Sundry writers report very remarkable laying performances of the Rouen ducks. One laid an egg a day for 85 days: three ducks from February to July laid 334 eggs, besides a few soft ones and five double eggs. One of these laid every morning for 92 days. The young ducks often lay in autumn a good clutch of eggs, and it not unfrequently occurs that a duck which is a first-rate layer will manifest no tendency to sit. This variety of ducks has in common with many other kinds, great beauty of plumage, which varies somewhat in different individuals. The drakes are heavier than the ducks, but the difference is slight in comparison with the disparity between the sexes in most varieties. The beautiful green heads and necks of the drakes, iridescent with purple and copper hues, set off with a clean white collar and claret colored vest, give them a distinguished air which the various colors and distinct markings of the back and wings does not detract from. The females are brown, each feather being marked with black which gives them a speckled look.

The only variety which really rivals the Rouen as a useful and economical bird is the Aylesbury. These, a purely white English variety, are beautiful birds and highly esteemed in the markets of Great Britain, as also in the United States, where they are known. They are good layers and nurses, not noisy, good feeders, and by some, decidedly preferred to the Rouen. The eggs are white, sometimes inclining to blue,

while those of the Rouen duck are blue with thick, strong shells; of the two the Rouen has the reputation of being most hardy. Where ducks are raised for breeders, it is a practice, (founded perhaps on prejudice) to set ducks upon their own eggs; but if the young are wanted for market simply, the eggs are put under hens. Hens will hatch a clutch of duck's eggs some two days quicker than ducks will, but it is thought that the young have not so good constitutions. Young ducks raised for market often get injured by being allowed to go freely to the water. They grow faster and stronger if they only have enough to drink, at least for several weeks.

Prairie Sheep Husbandry.

It has become a very interesting and important question to this country how to increase our supply of home wools. Several parts of this question, for it is readily sub-divided into several minor ones, settle themselves naturally and well. The mutton sheep of heavy carcasses, and of middling or coarse (combing) wool, are bred to advantage where they can have care, protection in winter, and nearness to market. The product of the fine wool sheep possessing great value in small bulk and weight, is more easily transported great distances. Hence the more the blood of the hardy Merinos is blended with the flocks at a distance from the great mutton markets the better. The culture of sheep and production of wool at the far West, and in the States of Illinois, Michigan, Wisconsin, Iowa, etc., is conducted with very considerable profit and invites the attention of practical, hardworking, careful men, and clever farmers, as a quick way of gaining a competence, if not ultimately considerable wealth. This is well shown by a writer in the N. W. Christian Advocate, who says:

“He who embarks extensively in sheep husbandry in the older States must buy a large amount of comparatively high-priced land, clear up the forest, fence his land carefully, sow pastures and meadows, build barns for winter stor-

age and for shelter—or buy all these things already fitted to his hand—before he is ready to purchase a flock of sheep to commence his business. All this requires the outlay of much capital. The prairie sheep farmer can commence operations without buying anything but his sheep. Or, if he does not choose to be a pure nomad, he can buy acres for less than the annual interest of acres of the ordinary grazing lands of the old States. His principal necessary capital is a decent knowledge of his business, and enough energy to persevere in it. Thus have started a large majority of the pioneer sheep farmers of the new States. The new settler builds a little log house for himself and wife to sleep in—a rail pen covered with poles and prairie grass, for his “team” and his cows, if he is so fortunate as to own these luxuries—a high yard for a fold, and then he is ready to commence wool-growing! In ten years he can count more sheep, and sometimes more dollars-worth of property, than his Eastern competitor, who commenced with everything prepared to his hand. The rail pen gives place to the stable, and the uncovered fold yard is succeeded by the fold yard and spacious sheds. Fine fields of domestic grass for spring and fall feed, and of luxuriant corn for winter feed, surround the comfortable farm-house. Noble flocks of thousands are driven up nightly by his boys and by the “hired men”—who, in five years more, will be flock-masters themselves!

“Hay made from the domestic grasses—the “tame grasses” as they are called in the West—or clover, is but little known on the prairies. The wild grasses make sufficiently good hay, but like the preceding, it probably, in most situations, has a cheaper substitute in Indian corn. The remarkable adaptation of most of our prairie soils to this crop is well known. Eighty bushels of it to the acre would be regarded as a heavy crop anywhere—but an extraordinary one nowhere, on the first-class virgin soils. The stalks properly cut and secured, yield nearly double the feed per acre of the small varieties cultivated in the grazing regions of the Eastern States. Its cultivation, too, on the mellow, weedless, prairie soils can be performed vastly more easily and cheaply. With two-horse corn planters, and two-horse corn plows or cultivators, it is estimated that one man can properly take care of fifty acres of it. It should be cut up before the leaves are injured by frost, and placed in shocks, where it remains until it is drawn out to be fed to the sheep. It is drawn out twice a day and scattered on the ground. One active man, with a suitable wagon and team, and devoting his whole time to it, can feed about two thousand sheep. A firm, sodded field of domestic grass is very desirable to feed on, instead of one of wild grass, which soon becomes “poached” and muddy in wet weather. If the field is large enough to change the feeding places often, very little of the corn is wasted. Some farmers in place of cutting up the corn and drawing it out in this way, leave it standing in the hill, and fold the sheep on it a couple of hours twice a day, but it is a wasteful mode, for the frost-bitten fodder is much less valuable than cured.

“The sheep are generally wintered in the feeding fields without shelter, and even the farmers who have sheds do not put their flocks into them except in very stormy nights, and at lambing time. Those who have a sufficient number of feeding fields, divide the sheep in the beginning of winter into three or four lots. When this is impracticable, the lambs are merely separated from the flock, and all the rest run to-

gether. This last is very objectionable management, as it leaves the weaker and smaller to be pushed about and driven from the choicer portions of the feed by the strong, heavy wethers. Most flock-masters aim, however, to draft occasionally from the flock any that become poor or feeble, and to make some separate arrangement for them. The object of the prairie farmer is to have his sheep consume as much corn as practicable; for it is more profitable to convert it into animal products than to sell it at ten cents a bushel. A good sized grade Merino fed exclusively on it will consume and waste from three to three-and-a-half or four bushels during the winter, and the stalks on which it grew. If the corn is good, the proportion of ears to stalks is greater than it should be for the benefit of the sheep. Some farmers provide for this by making enough “tame hay” to give their sheep one feed a day; some make a quantity of prairie hay; and others, instead of burning their wheat straw, according to a prevalent, wasteful method, thrash and stack it in the feeding lot, so that the sheep can get to it at will, or so it can be conveniently fed to them when necessary. If the straw should be slightly brined when stacked, and the sheep be fed salt in no other way, it would prove an acceptable fodder for them, and would be sufficiently nutritious to meet their wants when accompanied with so much corn.”

However objectionable the practice is of exposing sheep during northern winters, to rain, sleet and snow, the general freedom of these flocks from disease argues in favor of the practice. Many lambs are unavoidably lost and severe colds and influenzas occasionally prevail, yet on the whole, the sheep are very healthy. The better the barns or sheds are, under which yearning ewes and young lambs are protected, the less will be the loss of lambs and the greater the profits. The prairies of the West offer rare inducements to young and energetic foreigners who have a little capital and aim to become good citizens of the Great Republic. The thousands who are forced to occupy almost or quite servile positions in our Eastern cities might soon become property holders and, if possessed of good principles, respected citizens.

A Grand Manure Pile.

We saw a few days since a pile of many loads of muck covering the carcasses of 100 horses. The farmer on whose land it is, gives a small price per head to a man who removes the old, worn out horses from this city, takes them upon his farm and kills them, retaining their hides, hoofs, and shinbones. The rest of the carcass, left upon the ground, is cut up somewhat and covered liberally with muck. Little odor which can be noticed at a distance of a few rods, arises from this heap, and none at all which a slight addition of soil or muck will not arrest;—this at the heat of summer. In the cool weather of autumn the heap will be worked over, mingled with more muck, the undecomposed bones thrown out, and the rest laid up for a finishing fermentation. We are interested to know accurately the results of some similar experiments, to come at the best methods of managing this valuable and commonly wasted material,—namely, how much muck to use; the quantity of soil, in case muck can not be got; the amount and value of the manure made from a certain number of animal carcasses, or a certain weight of the same, compared with an equal quantity of good stall manure. At pre-

sent we only know that dead animals furnish a very excellent manure at a very low price.

The “Rescue” Grass—Don’t get Caught.

The French have a new agricultural hobby; this time it is a grass which comes all the way from North America—“Rescue grass.” M. Lavalle has presented to the Imperial and Central Agricultural Society of France, a “Memoire” upon *Brome de Schrader* or “Rescue Grass,” in which it is set forth that the amount of green feed produced per acre is something wonderful, and that cattle fed upon it have the quantity of their milk greatly increased, though nothing is said of its quality. The “memoire” is said to have made quite a stir in the agricultural circles in France, and the French seedsmen have already sent over here for a quantity of the seed, which they probably will not get, as the grass is not known to the northern States. The plant in question is *Bromus unioloides*, and *Brome de Schrader* is the French for *Bromus Schraderi*, another name for the same grass. How the name “Rescue grass” came to be attached to it, it is difficult to say. (It should not be confounded with Fescue, which belongs to an entirely different genus.) This grass grows sparingly in Texas and the adjacent parts of Mexico, and we had a specimen sent some years ago from Georgia, but doubt if it is a native of that State. If this *Bromus* is worth cultivating it is the only one of the genus that is so. At any rate it will probably be puffed and be sold at a high price. Willard’s *Bromus* came out about ten years ago and some people who paid large prices for the seed found out that it was only chess, a *cheat* in a double sense. This newly talked of grass is own brother to chess. It may prove valuable, if it does so we shall find it out and let our readers know it, and meanwhile they are advised not to invest much in “Rescue grass.”

Wagons and Wagon Wheels.

This subject which was touched upon a few months since in this journal, has brought out several communications. From one of these from Elliott H. Angell, of Ingham Co., Mich., we condense the following, which describes a wagon in use in his vicinity, some parts of which are patented.

“For the benefit of the readers of the *American Agriculturist*, and to induce others to tax their inventive minds for still greater improvements in wheel vehicles, allow me to name some of the advantages in a wagon built on a plan invented by a citizen of this County. The wheels move straight forward; the face of the tire lies flat upon the ground and is parallel with the centre of the axle. It has four separate cast steel axles; each tight in a cast iron hub of the wheel. These axles bear upon as many friction wheels, one foot in diameter, thus dispensing with nearly all of the friction. The wheels are larger than ordinary wagon wheels, giving greater leverage. The wagon-box (and load) is considerably lower, and the draft is lower than in common wagons. There is no “gather” to the wheels. A self-acting break is attached. The wagon is light and strong and there is no “shake” to the tongue, yet a slight side pressure upon the tongue will guide the vehicle readily. There are no skeins or boxes to wear out; it can be made at less expense than ordinary wagons of the same capacity. Carriage makers set the wheels on the axles with what they call a “gather,” that is they set

them so that if rolled straight as they stand on the wagon, each wheel would roll to the center of the track in going from eight to ten rods. This is done to have the wheels crowd the "shoulder" instead of the "burr," or linch-pin. Now I submit to any candid mind whether it takes more power to roll the wheel the eight or ten rods, or shove it sideways the two feet three inches. There is then a loss of power which certainly adds much to the burthen sustained by the team. In the wagon described, all this is saved by the wheels moving in a straight line without "gather."

Every wheel and axle is a lever or system of levers and a fulcrum, no matter where or how they be used. The outer edge is the long arm of the lever or where power is applied (as in a water-wheel); the center is the fulcrum, and the friction is at the lower side of the axle, between the fulcrum and power (the ground is the power; the friction, the weight). In the new plan, the friction is on the top of the axle, and the spokes being two inches longer, there is an advantage of about six inches in leverage; the fulcrum is placed between the power and weight—another mechanical advantage. In addition to this, the upper side of the axle acts on the rollers or small wheels, one foot in diameter, and these turn round but thirty-two times in a mile, thus operating by a compound lever, and greatly lessening the friction. There is one wagon in this place that has been in almost constant use for eight months and has been tested in many ways. On a hard, smooth road less than half the power will draw it with or without a load; in muddy or bad roads it requires about two thirds the team that would be required were a common wagon used to draw an equal load. There is no piece of mechanism in use among civilized men more useful than a wagon, and I have given you this imperfect description to invite talent in this direction: though this is a decided improvement, yet there is a chance for still further improvement. Will not mechanics look into this, and at least compete in manufacturing?"

Cheese-Making in Small Dairies.

So much has been said lately about the Factory system of cheese-making, and the products of a few large dairies, that we lose sight of the multitude of small dairies of a dozen cows or less, which supply no unimportant share of all the cheese for market, and especially for home consumption. There are many persons who regard cheese-making as a mysterious art, and for fear of failure do not undertake it. There is to be sure a great advantage in experience, and this every dairywoman must gain for herself, nevertheless there need be little fear of wasting much milk, when a common sense woman attempts to make cheese, even on a small scale. If any one is about to undertake to make cheese and has no previous knowledge of the subject, it would of course be best for her to visit some good dairy and learn what she can from the dairy-women, before undertaking it on her own account. The kind of cheese usually made in the United States is what would be called "English" cheese. Though there are many different kinds made in England, the cheeses of that country differ so much from those of the continent, that ours would be classified with them. As to the production of the cheese closely resembling those of continental Europe—Dutch, French, German, Swiss, etc., of which there are probably 50 entirely distinct kinds—we conceive that there is no difficulty at

all; and moreover assure our readers of foreign birth and training, that even passable imitations of those kinds which are imported would meet a ready sale at high prices.

Without discussing the economy of making cheese from a very small number of cows, we merely now consider the method and results. The following process is usually adopted. The night's milk is set in shallow tin pans in a cool place. Butter being an object as well as cheese, the milk should not be more than two or three inches deep. In the morning, while the milking is going on, the night's milk is skimmed and warmed in a brass kettle to the temperature of new milk. The new milk having been brought in, old and new are then mixed in a tub of suitable size. (If the weather is so cool that the milk will not sour, it may be kept over one day, and there will be three milkings of old and one of new milk.) When the milk is thus made ready the "cheese is set," that is, the rennet is added, and it is allowed to stand quietly for half an hour, for the "curd to come." Arnotto also is added for coloring, if desired. The rennet consists of the salted and dried stomach of the calf. This is prepared for use by soaking in water or whey in the "rennet pot." The quantity of the liquid required to "bring the curd" is fixed by trial, and more is added, if it does not coagulate in time. When the curd has "come," it is carefully cut across both ways with a one bladed wooden knife, or better with one of steel with four blades. It is then allowed to stand for the whey to separate, which is slowly dipped off, and the curd gently worked with the hand to favor the separation of the whey. To make the curd more firm, some of the whey is warmed in a kettle and poured upon the curd again. This is what is called "scalding the cheese," a misnomer to which must be charged more poor cheese than to any other cause, except perhaps the neglect to cleanse properly all the dairy utensils. The whey for "scalding" should be only slightly warm to the hand, that is, not much more than 100° F. The hotter the whey is, the less time is required for the operation, hence there is a temptation to employ hot whey instead of that moderately warm only, as just stated. When this process is completed, the curd is dipped into a strainer, spread in an open basket or box for salting. Then more whey drains out and salt is added, nearly one ounce to ten pounds of curd, and thoroughly mixed. It is now ready for the press, or it may be wrapped in the strainer, a weight placed upon it and kept to go with the next day's curd to make a "double curd cheese."

When this is desired, the curd thus prepared, and not salted, is kept until the new curd is ready, and then it is cut very fine and mixed with it. Some prefer to take the curd when ready for scalding, and hang it up to drain in a strainer. This curd cut up fine is added to the new curd, when both are "scalded" and salted. A cap fitting the inside of the press-hoop, or a strainer cloth is used to hold the curd when it is put in the press for pressing. It is changed at the end of twelve or twenty four hours, the edges if necessary are pared and again pressed. The pressure, either from a lever or screw, should be light at first, but afterwards very heavy. When the cheese comes from the press, it should be capped with thin cotton cloth made for the purpose; or these caps are pressed in. Repeated turnings, greasings, and rubbings to keep the cheese from mould and from getting out of shape while curing, complete the process. The temperature of the curing room has much influence on the cheese. A

kitchen is rather too warm, and in a cold, damp room they cure too slowly and are apt to mould. Now in this way just as good cheese for eating is made in dairies from two to six cows as in those of greater pretensions; in fact, some of the best cheese the writer has ever eaten was made from the milk of two cows. Some of the most successful dairy women too, have been those who have taken up the business without previous training, but possessed of good sense and habits of neatness; they have mastered all the "mysteries of cheese making," so that a "huffy cheese" or a "cracked cheese," or a "sour cheese," or a "strong cheese," or a "white oak cheese" was unknown on their shelves.

A Woman's Experience with a Kicking Heifer.

DEAR AGRICULTURIST.—I'm a very green farmeress, on a little place of twenty acres, and "no man to it" but my father, most eighty years old,—a doctor all his life at that. With a little help about the frame I have made a hot bed after your model, and am right proud of the cabbages, cauliflowers, cucumbers, &c., started in it, and my Hubbard squashes are charming.

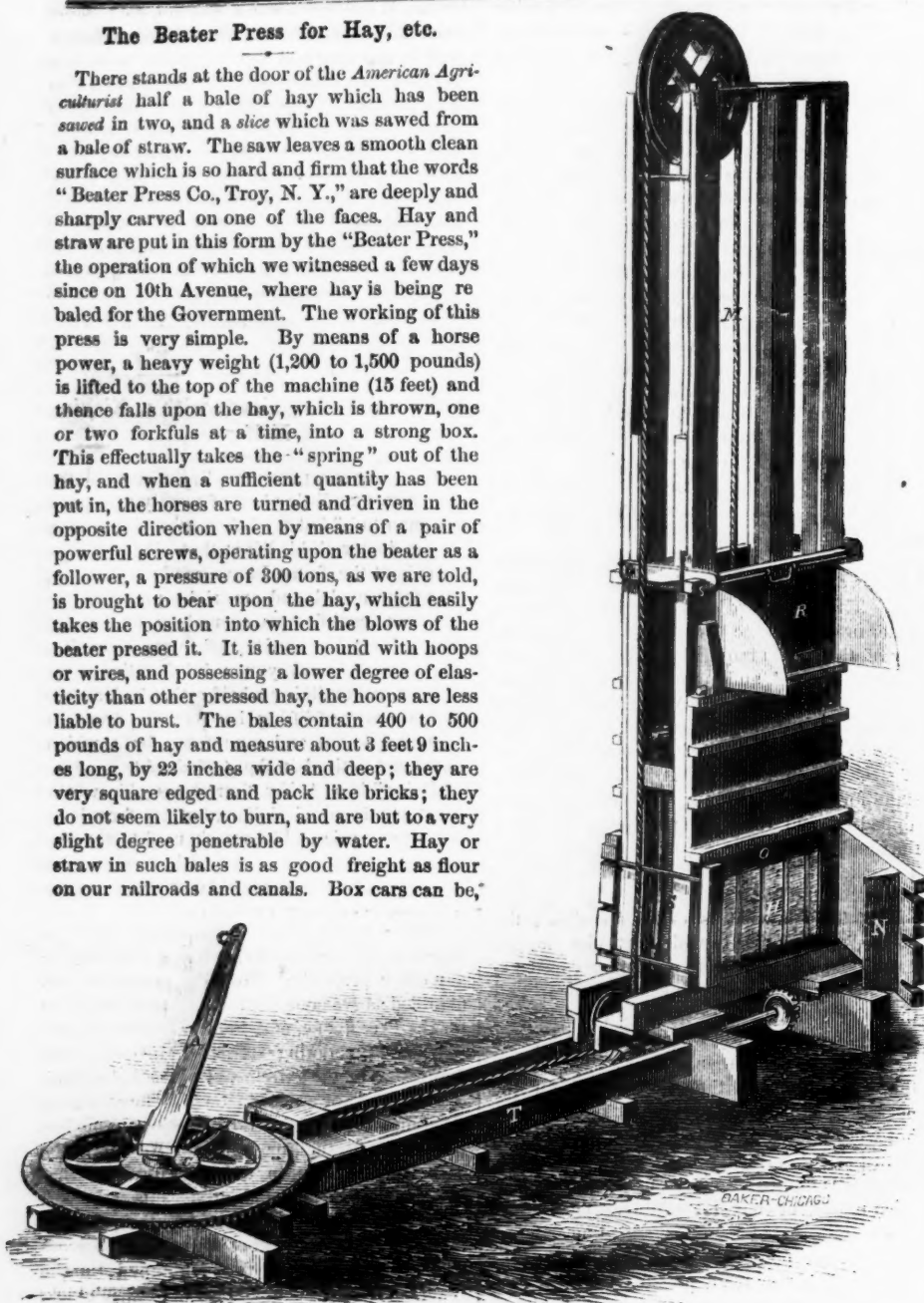
I venture to send you a brief notice of my experience in milking a heifer that had an unfortunate way of lifting her foot, disastrous in its consequences, and my remedy for it, which I have not noticed in the *Agriculturist*.

"Daisy" is a heifer four years old, worth about one hundred dollars, but not for sale at that, or any price. She wasn't used to women, and I—wasn't used to cows. I learned to milk in one lesson, on a gentle old cow in the neighborhood, but I was mortally afraid of Daisy, and she would empty the contents of the pail over me, and send me flying like a foot ball or any other projectile. Now I'm *nothing* if not dignified; I was once introduced to a candidate for the Presidency, and to be manufactured into a sort of shooting star, in a *milky way*, was depressing in the extreme. I perused the *Agriculturist*, and got a man to tie her fore foot up, whereupon she laid down—other remedies proved ineffectual, or were not suited to the case, when almost in despair I learned that somebody tied the two hind legs together.—I double a bit of rope, a little more than a yard and a half long, tie a knot in the middle-noose around one leg just above the foot, and tie the other with the ends of the rope. She can't kick, how can she? It doesn't seem to hurt her feelings in the least, putting on, or taking off, or wearing it, and I milk in peace, and wish the remedy may do any one else as much good as it has me. I must add, that Daisy and I are on the best of terms now. R. F. H.

"DIRT FLOORS" FOR STABLES.—In summer the feet of horses which are little used, or those used only upon hard pavements or dry roads, often become very dry, hard and hot, especially if they stand upon wood or stone floors. The wood floors are not only dry but they absorb urine, which decomposes, evolves ammonia, and promotes this effect. An approved remedy for this is to take up the wood and lay a stone floor of small cobble-stones in cement, slanting slightly to the rear; then to fill in the stall 6 inches deep at the rear, with sand or sandy loam, leaving it slanting to the front. Enough of this should be removed and renewed daily to give the horse a bed of clean, dry, but not drying, sand. Little bedding will be needed, and the feet will soon gain a natural moistness.

The Beater Press for Hay, etc.

There stands at the door of the *American Agriculturist* half a bale of hay which has been sawed in two, and a slice which was sawed from a bale of straw. The saw leaves a smooth clean surface which is so hard and firm that the words "Beater Press Co., Troy, N. Y.," are deeply and sharply carved on one of the faces. Hay and straw are put in this form by the "Beater Press," the operation of which we witnessed a few days since on 10th Avenue, where hay is being re-baled for the Government. The working of this press is very simple. By means of a horse power, a heavy weight (1,200 to 1,500 pounds) is lifted to the top of the machine (15 feet) and thence falls upon the hay, which is thrown, one or two forkfuls at a time, into a strong box. This effectually takes the "spring" out of the hay, and when a sufficient quantity has been put in, the horses are turned and driven in the opposite direction when by means of a pair of powerful screws, operating upon the beater as a follower, a pressure of 300 tons, as we are told, is brought to bear upon the hay, which easily takes the position into which the blows of the beater pressed it. It is then bound with hoops or wires, and possessing a lower degree of elasticity than other pressed hay, the hoops are less liable to burst. The bales contain 400 to 500 pounds of hay and measure about 3 feet 9 inches long, by 22 inches wide and deep; they are very square edged and pack like bricks; they do not seem likely to burn, and are but to a very slight degree penetrable by water. Hay or straw in such bales is as good freight as flour on our railroads and canals. Box cars can be,



THE BEATER PRESS.—Showing the perpendicular guides of the beater, which is raised by a rope passing from the horse-power over the wheel at the top;—the box above the mould, into which the hay is thrown;—the mould, represented open, containing a bale of hay—and one of the screws on the side of the box and mould, by which the final pressure is applied.

loaded with it, and not merely half loaded as is the case with other hay. Vessels trading with foreign countries which often leave our ports in ballast will find this a profitable lading, for not only is it more easily handled than ballast, but very valuable at their destination. Thus we anticipate a foreign market may be opened for our hay as soon as the rebellion is put down.

The application of the beating principle is very wide. The pressing of cotton, hemp, flax, oakum, hops, husks, corn fodder, sorghum, leaves, rags, wool, etc., will suggest itself to every one. Spent tan bark, saw dust, shavings, etc., have been successfully experimented with, and a compact fuel thus formed; besides, we have suggested to the proprietors its applicability to pressing *peat*, which abounds in some parts of the country, into a compact and marketable fuel, as another means of affecting the present extortions of the coal monopolies.

At present all the presses made by the Com-

pany are in the employ of the government; about two bales of hay are put into one, which operation increases the value at least 5 dollars per ton. The danger from fire, and injury from water are so decreased, that it is confidently asserted that hay thus baled will neither burn, nor will soaking in a river wet more than a couple of inches into the bale. It is also asserted that it does not require housing; that it may be pressed in the field even less dry than would be deemed necessary for stacking or housing, and that it does not mould. Several railroad companies have already announced that they will soon adopt a rule that hay and straw shall only be transported in *box cars*. This will amount to a refusal of hay pressed in any other way, and some assert that they are only induced to transport hay, pressed in the common way, now, on account of the necessities of the Government. We give our readers the facts and statements which are presented to us in relation to this

very interesting invention, which seems likely to have a marked influence upon our agriculture. Further information may be had of the "Beater Press Co.," addressed for the present, care of Cornish & Congdon, 538 Pearl-st., N. Y.

Irrigation.

The art of irrigating gardens and more extensive fields of grass, grain, and roots, is almost unknown in this country east of the Great Plains, and it is a fact to-day, that in the oldest States, the richest lands—these which a little labor will make most productive, namely, those best adapted to irrigation—as a general rule, are considered the poorest lands of the farms; and if such a piece lie so that it may be conveniently detached from the main body of a farm, it may commonly be bought cheaper than any other land on the farm. The kind of land we refer to is low ground, skirted by brooks, often overflowed, swampy in spots, given up to reeds and rushes, possibly difficult to drain, but usually this point uninvestigated. Brooks that do not dry in summer, or living springs on one's farm, are, and will by and by be considered the greatest boons of nature. We are happy in possessing a country the greater part of which is "a land of hills and valleys, and drinketh water of the rain of heaven;" so that those fields which can not be artificially watered, may still be made as we see at the present time very fertile. Draining, deep plowing, and good tillage, will make almost all the arable land east of the Mississippi, produce good crops. By proper investigation and use of the facilities for irrigation, an immense area now liable to damage from drouth, though yielding average crops, might become almost inconceivably productive; a great area of dry and unproductive land might be made very fertile and the capacity of the country to sustain a dense population, vastly increased. In time, we venture to say, many of the hills of New-England and the older States will produce more than the wildest dreams of their present owners imagine; and it is not too much to anticipate that these States will yield enough to feed the present population and a good deal more, though now they can only balance their debts to the West for food, by the products of labor in their factories and machine shops, and by the enterprise of their merchants and seamen.

The first kind of irrigation likely to be undertaken extensively in this country is the formation of "water meadows." When these are well made, they are laid out in "beds," which vary in width and length according to the "lay of the land." One of these beds we will say is two rods wide and six rods long. Through the center is a ridge running from one end where the water supply is, to within 10 feet of the other. This ridge is a foot higher than the sides of the bed, from one end to the other it is nearly level, and a shallow water channel runs the entire length. The channel is so arranged that when filled with water, it overflows uniformly from one end to the other, equally on the different sides, distributing the water uniformly over the entire surface of the bed. A gate consisting of a bit of board made tight with sods, etc., closes the end of the ditch or regulates the flow. Many of these beds are often arranged together, fed by water from a main ditch or leader, from which the distributing ditches all lead. A ground plan of such a series of beds is shown in fig. 1. *A*, is the main ditch, and *B*, a distributing ditch. Fig. 2 represents rather

an exaggerated profile, as if a section were made from *D*, to *E*, fig. 1. After the water has flowed down the slight incline from the top of the beds, (*B*), to the hollows between the beds, (*C*), it flows down more or less rapidly, according to the slope in a sort of gutter between the beds. This gutter is in some cases "puddled" with clay. That is, some clay is spread evenly in

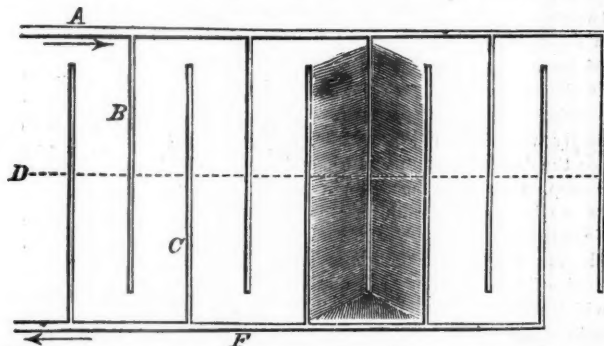


Fig. 1.—PLAN OF SEVERAL IRRIGATED "BEDS"—ONE OF THEM SHADED.

the gutter, and it is pounded hard so that water will not percolate. These surface drains (*C*) discharge into a drain (*F*) below the beds, which collects the water and conducts it off, or to some place where it can be used a second time.

Thorough drainage increases the good effects of irrigation very much, particularly in heavy soils. The drains are laid under the surface drains (*C*) and 3 feet below them, great care being taken to prevent holes washing down to the drain. The water collected in the underdrains coming out usually at a lower level than the ditch *F*, may be used independently of this, or with it, in subsequent irrigation.

The readers of the *Agriculturist* in California, New Mexico, and Colorado, might give those of the East, many useful hints in regard to the use



Fig. 2.—PROFILE, OR SECTION OF "BEDS."

of water to make crops grow without rain. For in those countries little or no rain falls during a great part of the year, and gardeners depend upon the streams, and wells sometimes, for water which they guide in channels among the grain and other crops, as well as fruit orchards and vineyards. "Water meadows" are very common in Germany, and are increasing very fast in Great Britain, while in southern France and Italy, there are extensive districts rendered fertile only by this use of water. The employment of brooks and other streams for this purpose is regulated in these countries by rigid laws, so that no one shall take water from a stream, which waters his neighbor's ground, and not return it to the old channel again.

Tobacco Culture.

We continue our notes on the culture of tobacco chiefly for the sake of many who are raising it this year for the first time. The fields which have done well, are by the first of August beyond hoeing, and many are ready to be topped, while some after having been subjected to this operation are sprouting with "suckers" from every leaf-axil. The topping leaves 16 to 18 leaves on the plant as a general thing, though in the case of late fields or single plants, when there is either danger of their not being fit to cut before frost, or at the time of the maturity of the rest of the crop, it is desirable to top low-

er, letting not more than 10 to 12 leaves remain. The whole strength of the plant goes to forcing them to an early maturity. Soon after topping, the suckers begin to grow, those on the upper part of the plant making most rapid growth. When the longest are about 4 inches long, break them off, taking care not to hurt the leaves; worm at the same time—indeed the worming is

never to be omitted nor care relaxed. The larger the leaves and the more perfect they are, the greater the injury the crop will receive from worms if they are neglected. If the weather is warm and not too dry, the fortnight after topping will show great changes in the character of the tobacco plants. The leaves will have attained nearly their full size; they will have become turgid and full of veins, and a good deal thickened up. The worming force will have to move about with great care, except at high noon, when the heat of the sun will cause a softening of the leaf and less brittleness. When the tobacco is fit to cut, it becomes somewhat spotted and yellowish, usually the surface a little gummy, and when the dew is on, the leaves break easily if folded and pressed.

Before tobacco is cut, the houses or "tobacco sheds" in which it is to be hung for drying and curing, must be prepared, the system of hanging decided upon, and all things made ready. Systems vary greatly. At the South and West it is usual to tie the plants together in pairs so that they may be hung astride of poles in the sheds. In Maryland and Virginia a common practice is to split each plant down, before cutting so that it will straddle a pole in the same way.

Another way is to drive nails or pegs slanting into the butts and hang the plants by hooking them upon frames or rods. Yet another method is to "spear" the plants by passing a rod through the butts of as many plants as will hang upon it. The method practised in the Northern States is usually to bind the plants with a cord alternately upon each side of rails or bars which are in place in the sheds. This way has been described and figured in former volumes, and in the present volume, page 76 (March), another and we think better method than any "Reader's Plan," is described and illustrated.

Tobacco is cut in clear days after the dew is off, the plants being carefully handled. A man on his knees, lifts the leaves and severs the stalk with a hatchet or corn knife; a saw is sometimes used and preferred. The plants lie until wilted so that they can be handled without breaking and tearing. If the sun is very hot, half an hour's exposure or even less will often burn the leaves so that many will be damaged. In such a case turn that which must be long exposed, and cart to the sheds as rapidly as possible, laying plants into the vehicle so that each may be easily lifted without disturbing others. When first hung the plants should only slightly touch. There should be a free circulation of air under and above; shutters on opposite sides of the building are also desirable. After hanging a few weeks the rails may often be slipped closer together to make room for a later portion of the crop. There is danger in hanging too close that the plants will mould and heat, and in case the weather is close and damp for many

days (such weather seldom occurs to an extent to damage tobacco in the Northern States) it is customary at the South and West to build fires in pits under the tobacco, so as to thoroughly change the air and check a tendency to mould. Stoves are better, for then the smoke is carried away. A platform suspended a few feet over the stove will tend to spread the heat that the plants hanging very near shall not be the only ones benefited. The best way is to have fixed flues from furnaces laid in the floor of the house, by which the temperature can be regulated.

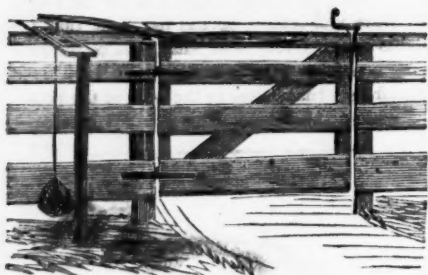


The "Locomotive Seat."

This is an ingenious contrivance, to save the strain of the backs, and muscles of the legs of persons whose labors require them to maintain a stooping posture, when they have frequently to move short distances, and hence can not take an ordinary stool with them. Especially is this adapted to relieve the nurserymen and gardeners in some of their labors—for instance in grafting and budding near the ground; or setting out plants with which considerable pains have to be taken. The construction is easily seen by the engraving. An iron sole is firmly attached to the foot; upon this sole and just back of the heel is a socket into which fits a straight ash stick of convenient length, and upon the top of this is a circular disk of wood which affords a very comfortable support to the body, taking the greater part of the weight entirely off the legs. The name "locomotive" indicates that the seat walks with the user. The fact, however, is that the user walks with the seat attached to his foot. It is not in the way of any common movements, and instead of being a temptation to indolence, is rather an inducement for a man to stick to his work, and not find an excuse to get up and walk off somewhere to ease his legs. We have suggested to the inventor its use as a milk-stool, and if the experience of others is like that of the writer, the usefulness of such a stool will be generally recognized.

A worn-out surgeon, just home, from the Army of the Potomac, seeing one of these seats in the office of the *Agriculturist*, was so much pleased with it, that we urged him to take one back with him. The surgeons have to bend over the wounded men as they lie upon the ground or in the low "stretchers." They can rarely find room to place stools if they had them, but with these articles they would have a seat wherever they could find standing room. Following out this idea several of the stools have

been forwarded by the inventor through the Sanitary Commission, for the surgeons to test their utility. The inventor and patentee is Rev. E. Whittlesey, of Hammondtown, N. J., for many years a missionary at the Sandwich Islands.



A Simple Gate Shutter.

The skill of a good mechanic who works with furnaces and lathes, and the conveniences of a good machine shop, will provide many things for the farm which are exceedingly convenient and useful; but we place higher value on a class of convenient and useful contrivances wrought by the native ingenuity of the farmer and with the tools that are at every body's command. An example is at hand in this contrivance for shutting a gate, which is sent to the *Agriculturist* by A. L. Hatch, of Richland Co., Wis., who thus describes it. A stick is fastened to the top of the gate, extending back over the fence, a little to one side and elevated sufficiently to clear the fence when the gate is opened. On the end of this stick is tied a rope with a weight attached, as represented in the diagram. A board is nailed at one end to the top of the fence, projecting at right angles to it and supported at the other end by a small post. Two rollers are set in this board, and the rope passing down between them, will effectually shut the gate which ever way it may be opened.

Hop Raising in the State of New-York.

Central New-York is the most important hop district of this country, but the culture of the hop is fast extending over other parts of the State; nor is the hop growing interest confined to New York, but is rapidly advancing in the Eastern, Middle and Western States. To the farmer engaged in the culture of hops the most important thing is to grow them properly, and the next to secure the crop in good order, and have them perfectly cured so as to have the color, flavor and texture all right, without injuring their strength. To do this, very much depends upon the picking, but the best grown and most properly picked hops are frequently spoiled in curing. If they are not sufficiently dried, they are liable to heat after being baled, so as to be entirely worthless. If over-dried, or if the heat in drying is raised so high as to scorch any part of them, much injury is done. Stoves made expressly for hop kilns are now generally used, with pipes which convey the heat around the room under the drying floor, and carry the smoke to the chimney. The drying floor should be about twelve feet above the ground on which the stoves stand. It is made of strips of plank, one and-one-fourth by two and-one-half inches, set edgewise about one and-one-half inches apart, so as to be strong enough for a man to walk on them. This is covered with a cloth which is generally made of linen, like strainer cloth. In England this cloth is frequently made of hair, which is considered best, as it does not

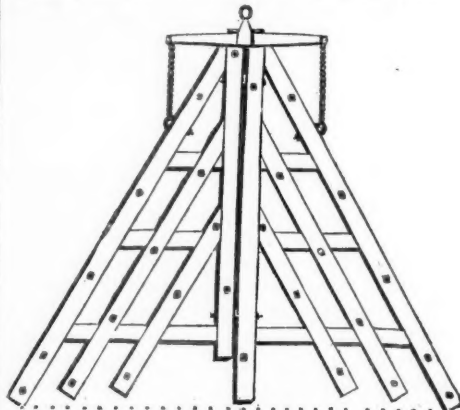
"fur up" by the gum of the hop, as cotton cloth does. Cloth made of hard twisted linen thread, and woven open, or "low sleyed," does very well, as it permits the heated air to pass up through the hops, which should lie upon the cloth twelve inches thick, or more. There should be a ventilator above to let the steam pass off freely as the green hops are drying. A drying floor twelve feet by twenty-six will dry about 200 bushels at once, in eight or ten hours—so two floors can be dried in one day and night. They are generally turned over once or twice during the process of drying, but a skillful hand can finish them perfectly without moving them after they are laid on the drying floor, which avoids breaking the hop. Great care should be taken to keep them as whole as possible. They should not crumble in the hand, but be as soft as a kid glove. If too much dried, a little salt is sprinkled on coals of fire in the stove room under the hops, which are then allowed to lie in this damp atmosphere half an hour. This will cause a toughness and prevent crumbling as they are moved to the cooling room which opens from the kiln.

The floor of the cooling room should be two feet lower than the drying floor, and should be smooth and quite spacious. When perfectly cool they may be put into a bin or piled up in the same room until the press is ready. The Lever Press now in use in Otsego Co., is much preferred to the Screw Press. The less they are moved while hot, the better, as they crumble easily while warm. Most farmers use some sulphur to bleach the hop while it is being dried. The sulphur is put on a bed of coals, or placed on the hot stove for an hour or two during the drying process. While using the sulphur the ventilators should be partially closed to retain the gas about the hops. In that case half a pound of sulphur will be sufficient for a kiln, unless the rust has attacked the hop, when the sulphur is more freely used. The hops are sprinkled with water, thoroughly mixed several times, and the sulphur as often renewed.

In picking hops the universal practice has been to cut off the vine, and raising the pole to carry it to the box. The pickers strip off the fruit into the box, and in so doing get with the hops, leaves, dirt, and whatever falls from the mass of vines; and notwithstanding the care of the box-tender and owner, much foreign matter is almost always mixed with the hops. The Horizontal Hop Yard, described in detail on page 140 (May No.), is being extensively introduced. This secures a very pure quality of hops. The main vine is not cut at all, when the crop is harvested; only the arms that bear the hops are taken from the vine by the box-tender. There are no leaves except very small ones on these arms. It secures nice picking and makes it very light work to tend the pickers; even the girls can "tend box," as there are no poles to pull, nor are the vines cut near the root. The flow of sap from the root when the vine is cut near the ground weakens all hop yards, and destroys some entirely; and when as by this process it is avoided, the full strength of the vine is preserved to promote its next year's growth. This very simple process of training the vine low on twine, or otherwise connecting the stakes, secures strong, healthy roots, as the vine need not be cut down before it has fully matured, and the sap ceased to flow from the cut surfaces. A good observer, who has just made a tour through the hop region, writes to the *American Agriculturist*, that from bleeding an unusual destruction of hop vines has taken place this year.

A Good Harrow.

Mr. W. D. Morton of Lapeer Co., Mich., sends the accompanying drawing of a harrow, and writes as follows: "In return for many valuable hints in the *American Agriculturist*, I send you a plan of a harrow which I made some seven years ago, and have used on land both smooth and rough with perfect satisfaction ever since, and can now recommend it to your readers as being better than any other I have yet seen. It will work wherever the old-fashioned letter A drag will, among stumps or stones; either side, or the middle, may be lifted over stones or stumps with equal ease; and when the obstacle is past, it will resume its usual position. On smooth lands it is not so readily swung out of its place as the common double square harrows, nor drawn at an angle by any slight obstruction, or irregularity in the plowing; but will run straight ahead. It will run hollowing in a water furrow, between lands, and it will run crowning on the top of the ridge, thus nicely rounding off the ridges. It will make its mark every three inches, with the exception of two spaces at each side, and one in the centre, which are $4\frac{1}{2}$ inches each. The proper working of this, or any other double harrow, depends on putting the drawing staples in the line of draught of each side, which so nearly intersect the centres of gravity of each side, that the proper point may be found by hanging up each half separately, after the teeth and hinges are put in, so that the centre timber will be perpendicular. Every one who has used this harrow pronounces it an improvement, and several have been made already from my model. Convinced of its utility I de-



MORTON'S IMPROVED HARROW.

sire to see it in general use, and offer it freely, through you, to all who wish to know how to make a good and easy working harrow. One centre piece is six inches longer than the other, for facility in getting hold to lift the middle when necessary. Two teeth in each centre piece run in the same track; they are better to be both in, to balance the harrow. The draught bar must be equal in length to the distance between the drawing staples."

This harrow differs from the excellent Geddes harrow, which is the best form of a harrow in market, chiefly in the "draught bar," as our correspondent calls it, which it will be noticed is not attached to the point of the harrow at all, but is free to sway about in any way the chains will let it; and we see no reason why this "draught bar" might not be attached with perfect ease to the Geddes harrows now in use. This construction will enable us to hitch the team nearer the harrow and yet not lift the point teeth out of the ground, and if by any means the harrow be swung out of its proper

course, the power acts at a mechanical advantage, quickly drawing it back into line again.

Origin of the Chester County Whites.

There has been an interesting mystery concerning the origin of this, fast becoming famous, breed of swine. It has been attributed to the crossing of a "Bedfordshire" boar upon the common sows of Chester Co., Pa., a judicious selection of the progeny and careful breeding ever since. There being, however, no distinct breed of swine in Bedfordshire, Eng., which has a reputation on that side of the Atlantic or any record so far as we know, it is still a matter of doubt what kind of a hog it was that made so strong a mark. The late Duke of Bedford was a man of liberal sentiments and a distinguished patron of agriculture. The hogs on his estate at Woburn, were remarkably fine, especially his Berkshires, which were improved by an admixture of Chinese blood. This family never rose to the dignity of a distinct breed, but was distinguished for large size and rapid fattening properties, and is now extinct so far as we are informed. The Duke sent a pair of his swine as a present to Gen'l Washington, but they never reached him, for the man having them in charge sold them. The hogs made their mark in Maryland and Southeastern Pennsylvania, and wherever they found their way; other like importations were made, with good results upon our common stock of pigs. The Woburn breed is described as very large, spotted, maturing early, and fattening readily.

The origin of the Chester County hogs is stated by Solon Robinson in his book, noticed in our last number, to be from an importation of two Bedford swine by James Jeffries, a sea-captain, who sent them to his farm on the Brandywine, whence the breed has been disseminated. This was about 1820. Another statement is that a pair of hogs taken on board a ship from England for food, and not used, were bought and sent for stock pigs into Chester Co., and from these sprung the breed. Adding to these another statement recently received, in a letter from Israel Lamborne of Chester Co., Pa., we furnish our readers all the facts in our possession that bear upon this subject. Mr. L. writes, "Now as to the origin of the Chester Whites, they originated under the care of Thos. Lamborne, Esq., 45 years ago, from a pig imported from Bedfordshire, England, by Joseph Kersey, son of Jesse Kersey. The hog measured 22 inches across the shoulders and his live weight was 800 lbs. He was kept for the improvement of stock until he died."

These accounts all agree in tracing the improvement to imported English swine, and all but one, which is very indefinite, attribute it to the "Bedfordshire breed." This may all come from a strong prejudice in favor of these hogs, which may have naturally arisen after the progeny of those sent as a present to Gen'l Washington became famous, leading farmers to call their excellent hogs "Bedfordshires." After all, though it is interesting to know their origin, yet the value of the breed is the chief thing. This is becoming very generally recognized. Since publishing the account of the great hog called "Benham's challenge," the stuffed skin of which is at the door of the *Agriculturist* office, we have heard of some remarkable cases of large Chester White hogs, one of these of the pure breed weighed last October, after being hauled 30 miles, 1,360 lbs., and we learn has been in good health and increasing in weight

ever since. The readers of the *American Agriculturist* will be furnished with particulars about him before long. At present his owner is patriotically serving with the Ohio 100-days men.

We again caution our readers against deception, and having impure blood palmed off upon them. Not a black spot or hair is allowable, though such are sent out sometimes even from Chester County. We know of pigs which developed into regular "land pikes" coming from the same source—sent out by a good breeder too, who could not supply all his orders from his own stock, and so bought a few pigs of his neighbors to meet the increasing demand.

Sheep—Grub in the Head.

The attacks of the sheep gad-fly, *Oestrus ovis*, at this season are often very annoying to the flock, and if not actually productive of disease and death, wear the sheep out, almost, by fright and anxiety. A flock of sheep where flies are plenty, exhibits a nervous excitement, painful indeed to witness. The eggs of the fly are laid in the nostrils of the sheep; the worms when they hatch, as they do very soon, pass up into the upper part of the nasal cavity, where they remain until the next spring; when having attained their maturity, they come out and go into the ground. Tar smeared upon the sheep's noses, while it remains fresh, will successfully repel this fly. Should many of the grubs gain a lodgement in the head, it annoys the animal very much. Mr. I. W. Sanborn, a Vermont breeder of distinction, makes the following statement in the Boston Cultivator, in regard to his own practice. "Restlessness and a peculiar motion of the head indicate that all is not right, and from such symptoms the disease is known. As soon as the first signs appear, catch the sheep, elevate its nose, and pour into both nostrils about a tablespoonful of spirits of Turpentine. Free the sheep and notice the results. The violent sneezing which follows, brings the worms from the head—usually several of them—and in 60 minutes, and often less, the sheep is eating and apparently well. It has been the experience of sheep raisers in this vicinity where sheep thus attacked are let alone, they are almost sure to die." Mr. S. admits the severity of the remedy, but insists on its desirableness. It is probably a prejudice of shepherds and farmers, but the belief is general that the life of the sheep is often a sacrifice to "grub in the head." That it occasions intolerable annoyance to the animals is true, and that this is associated with other diseases is also more than probable. If the turpentine will thoroughly remove all the grubs, it may be well sometimes to subject the sheep to the application. This gad-fly is of the same genus as the parent fly of the bott which infests the stomachs of horses.

Pulmonary Murrain among Cattle.—Warning!

The rapid and certain spread of this terrible disorder in this State, and no doubt also elsewhere, make it incumbent on us again to sound a note of warning to all who buy cattle for stocking their farms or for feeding. In the neighborhood of this city, deaths are constantly occurring; the disease is perfectly well recognized and known by the milkmen, and by the authorities, for if an animal dies by disease or accident, the owner is obliged under heavy penalties to notify the sanitary police, and have it

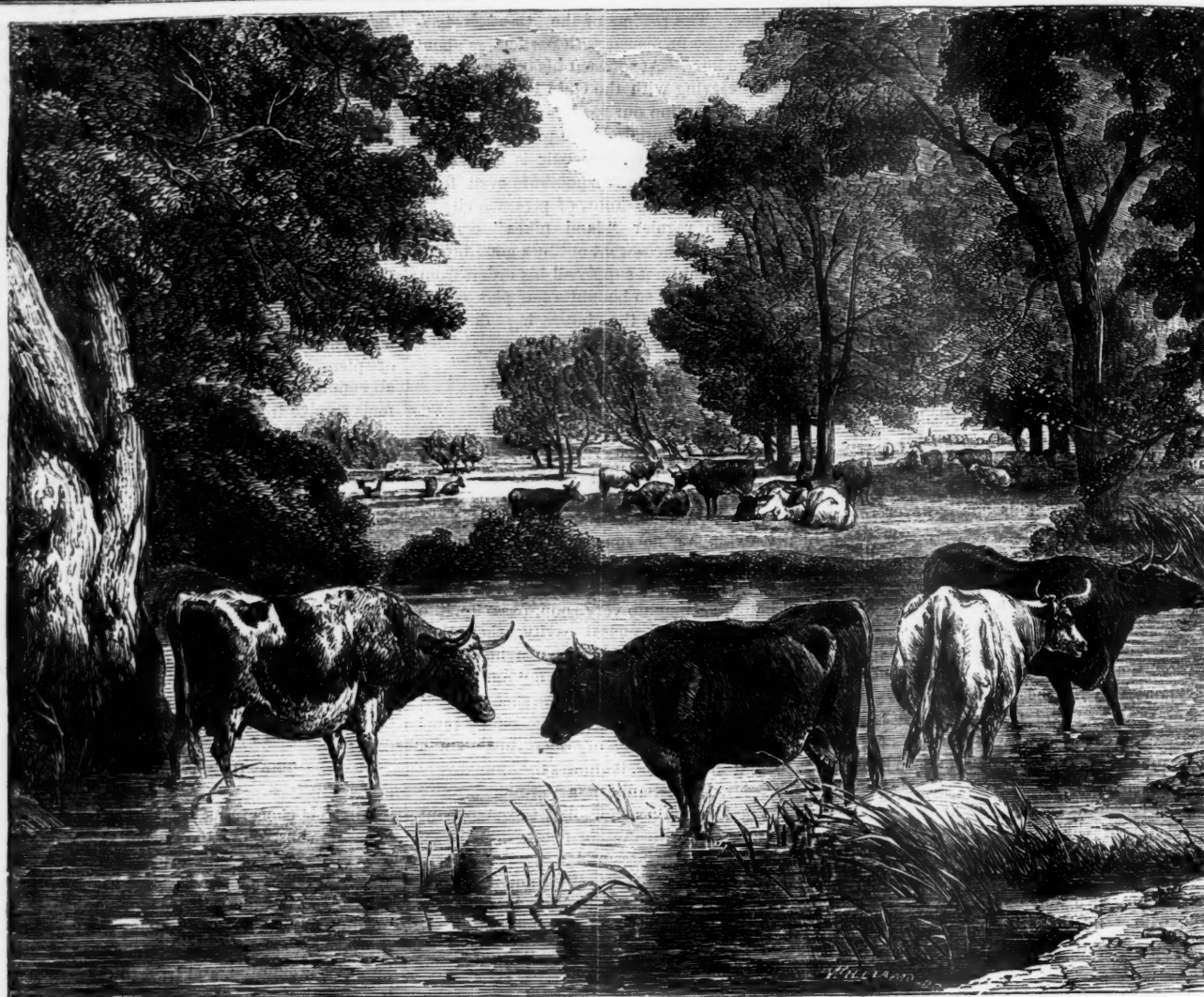
taken away; he may not remove it himself. Thus it happens that these cases are well known. The cows die in the swill milk stables, in private stables, and even on the commons, or unoccupied grazing grounds in the immediate suburbs of this city, and of its suburbs—Brooklyn, Williamsburgh and Jersey City. There is very great danger that cattle bought in this market and taken into the country to feed, will carry the seeds of disaster which can hardly be estimated. Almost every "cow leech" is sure he can cure this disease, and farmers who trust them may do so to their cost. It has baffled the wisest veterinarians of Europe, and there, any herd known to have, or to have had in it a case of pleuro-pneumonia, is at once cut off from all communication with other herds. The animals receive treatment which alleviates the disorder, and when those that survive recover, they are suffered in some cases to be fattened and killed. The losses to farmers of this State may soon be estimated by millions annually, if, as now seems inevitable, the disease continues to spread, for no efforts are made to stay its progress, to impart information concerning it, to investigate it in any way, by the public authorities or by agricultural associations. The facts we state, are facts. The warning should be heeded, or great loss will come upon the entire community, for every body is affected directly by whatever will effect the price of beef, milk, etc.

The Onion Maggot.

All facts concerning this pest are of interest to those whose crops have been swept off year after year by the onion fly. "A Canadian," writes as follows to the *Genesee Farmer*:—"On sandy land in Canada it was for some years impossible to raise a crop of onions from seed, and the consequence was that we were driven to import our supplies, and trust to the potato and top varieties. A lady who had a green-house and raised a large amount of early salad, had at one time a quantity of onion seed sown in the green-house early in the winter. After selecting such as were wanted for the house during the cold season, there was still left in the spring a large bed containing some thousands of plants. These were transplanted into the garden, and produced an abundant crop of fine bulbs, far better than any which had been previously raised from seed in the same place. They were also entirely free from the maggot, although beds of onions raised from seed adjoining the transplanted ones were completely swept off by the pest. The fact was taken advantage of in subsequent years, and an abundant supply of the finest onions was the result.

It would appear from this that the maggot produced by the fly can not exist on or injure the plant when it has attained a certain stage of maturity. Subsequent experiments confirmed this view of the case. Every one whose land is subject to the onion maggot, and who may try this plan, should raise the onion plants from seed sown under glass very early. The soil in which the seed is sown should be coarse sand, with a portion of well-rotted manure mixed through it. The young plants may then be removed without injuring the roots. In transplanting take care not to set too deep, and also take care that the roots go straight down into the earth, as they naturally would if sown where they are intended to stand."

It is not the place which makes the person honorable, but the person makes the place so.



COOLING OFF.—Engraved for the American Agriculturist.

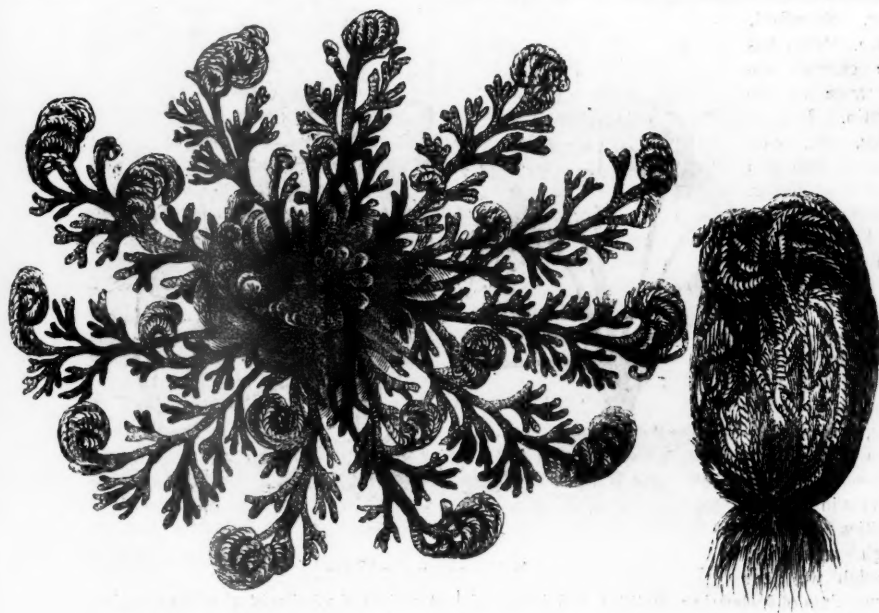
Comfort of Animals.

The animal's comfort and the owner's profit are two very different things. Most men do not seem to consider that in the "eternal fitness of things" it has been ordered that there should be a very close relation between some very different matters, and that the animal's comfort and the owner's profit are very closely connected. The engraving which we present, exhibits a scene of most comfortable repose. The sleek kine having filled themselves in the meadow during the cooler part of the day, are now in the enjoyment of the delightful shade and cool stream. They stand and chew the cud of contentment, and are worried neither by the heat nor by fears. It is evident that the functions of deglutition, assimilation and secretion must go on with much more profitable results than if the cows stood fighting flies in the hot, dry noontide, restless and discontented. Think of the amount of power wasted in stamping and pawing dust in the hot sun, in swinging the ponderous heads of a score of cattle from one side to another to beat off the flies, and in the many nervous steps and motions a herd of cows will make. Every one of these motions detracts from the amount of milk, or from the weight of the flesh of the animals. The worrying and the heat prevent the harmonious exercise of the vital functions and there is really a considerable loss resulting daily to the farmer, be he feeder or dairyman. With neat cattle

and other ruminants this is obviously true, for they must spend much time daily in chewing the cud. With horses, animals which do not ruminate, it is scarcely less the fact, for wherever there is good pasturage, they spend a good part of the day at rest, quietly digesting their food. A fruitful cause of the great decrease of milk in hot weather may be looked for in the discomfort of the cows. The abundance of grazing and of water early in the season secures an abundant flow of milk, and the drying of the pastures is accompanied by a decrease. The grass which grows in hot weather is more nutritious than the succulent growth of spring and early summer, and it requires a less amount to satisfy the animals. But even when the food supply continues, the state of the weather makes a great difference in the quantity of milk given. Hot, dry weather will inevitably decrease the amount, which will increase again when the weather changes. Much of this decrease is due to the discomfort attending heat and dust and the attacks of insects, for with cows in soiling-stables there is but little variation noticed. These cows are more comfortable, have plenty of food and drink, shade and company, and soon seem to forget that they are deprived of liberty. Fattening animals which graze undisturbed in confined limits and have little to distract their attention, and no ability or temptation to take much exercise, do much better than those in large herds which have considerable range, more or less fighting

and bullying, and other causes which excite them, or at least disturb the even tenor of their thoughts. It has been abundantly proved that the less of exercise an ox or sheep takes, so long as it is in good health, the less it can see, and the less it has to attract its attention in any way, the quicker and better it will fatten. Very much the same thing is true of all animals, though horses need light and exercise much more than neat stock, sheep or swine. As concerns animals at pasture whether feeding for the shambles, yielding milk, or young growing stock, the principle is equally applicable.

NOTHING TO WASTE.—The manure heap should be the great savings bank of the farm. Deposits may be made here upon good interest, which would only be nuisances elsewhere. There are miles of weedy hedge rows, acres of swale hay, and tons of weeds growing all over the country which properly treated would yield thousands of dollars. The weeds, if left where they are, will be worse than wasted; their seeds are already ripening for a tenfold or greater crop next year. Cut them down before it is too late, and compost them with lime and muck or manure. After the swale hay is all secured, to be used as bedding and thus worked over into manure, drain the spot where it grew, that "tame" grasses may hereafter feel at home, and give a better paying return. Much farm labor hardly pays in a pecuniary way, but labor upon the manure heap will return 50 per cent on its cost.



"Resurrection" Plants.

There are several plants, produced in countries where there are long seasons of drouth, which shrivel and roll up in the dry months, but expand when moistened by the rains and live or take the appearance of life. As these plants appear to come to life after dying, they have been termed "resurrection plants." One of the best known of these is the Rose of Jericho, which is often brought by travellers from the Holy Land. It is not a rose at all, but a little annual which has much the manner of growth of the carpet-weed, figured on another page. When the dry season comes on, its prostrate branches curl in toward the center of the plant, and the whole appears as a small ball, formed of the stems of the plant and its seed pods. The winds break this away from its slender root, and drive it about over the desert. The plant remains in this curled up state until it is moistened by rains or otherwise, when its stems unfold and its seed vessels open. This opening and closing can be repeated at will, by alternately giving and withholding moisture. There are some Oriental superstitions connected with this plant, but the phenomena it presents are only curious as one of the many contrivances for the scattering of seeds. Recently some kind friend, who withholds his name, has sent us from California, specimens of what is there called the "Rock Rose." This is an unfortunate name, as the plant is in no way related to the rose, and the term Rock Rose has already been adopted as the popular name of a very different thing. The specimens were of the shape and about the size shown in the right hand figure, of a brownish gray color, and looking neither beautiful nor interesting. Upon being placed in a saucer of water, the ball gradually unfolded and in a few hours appeared as shown above. The leaves (or more properly fronds) are arranged in a beautiful spiral, and look somewhat like twigs of arbor vitæ, but of a much darker and finer green. This plant is one of the club mosses, and is called *Selaginella lepidophylla*. The writer has seen this, or a similar species, growing upon the rocks along the Mexican frontier. During the greater part of the year it keeps rolled up in the manner already described, but during the short rainy season it expands and clothes the rocks with a brilliant verdure, in

wonderful contrast with their former barrenness. Our plants appear to be still alive, and we shall give them a chance to grow if they will.

Notes on Strawberries.

The following remarks upon new and old varieties, are made with the hope that they will in some degree help our readers in making up a selection. They are made after examining berries in the garden and upon our exhibition tables. It should be borne in mind that many varieties which are valuable for home use are wholly lacking in the characters essential to a market berry. Unfortunately the number of really valuable market berries is very small; in these firmness is the first requisite, and then good color and size are the next considerations, while flavor and sweetness are but little regarded, as fruit is sold in the market entirely upon its appearance. A hard, showy and productive fruit will, for market purposes, take the preference of one of high flavor, but which lacks these qualities. On the other hand the amateur, who cultivates for his own use only, looks to quality rather than quantity, and as his fruit goes only from the garden to the table, it is of little importance to him if it will endure transportation or not. In this enumeration no particular order is followed.

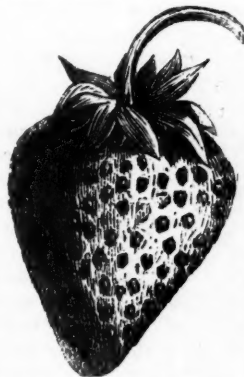


Fig. 1.—CONICAL BERRY.

is one which will allow the calyx or hull to be readily removed, and this is done all the more easily if the fruit is narrowed into a neck at the point where the hull is attached. The Agriculturist, Brooklyn Scarlet, and Monitor are

good examples of berries which have a distinct neck. A fruit of this shape is vastly preferable to one like that in fig. 2, in which the berry has taken on a monstrous form, and become cox-combed, as it is called. It is very difficult to prepare a fruit of this kind for the table, as the hull is imbedded in the flesh of the fruit and can not be removed without disfiguring it. The Triomphe de Gand, Austin, and Rippowan, incline to produce specimens of this shape.

Cutter, sometimes called *Cutter's Seedling*. A medium sized, solid berry, with a short neck. Said to be very productive. Specimens from several growers were rather sour, though it is sweet in good seasons—will probably prove a good market fruit.

Hovey.—An old variety, and if persons wish to grow a pistillate plant, this is one of the best. It is of good size and color, quite productive, and though not of the richest, is well flavored. Near Boston it is considered the standard sort, and is a favorite in some parts of New Jersey. The best cultivators have concluded not to recommend any pistillate sorts, although there are some with this defect having superior qualities.

Downer.—Of good size, shape and color, but rather acid and lacking in flavor. It is rather early and on account of its good shape and size is a fair market berry. Very productive.

Boyden's Mammoth.—A large berry, but hollow, flavor very fair. See Union.

Longworth's Prolific.—A firm, acid berry, of large size and good bearer. It has a thick foliage and is much prized in some localities.

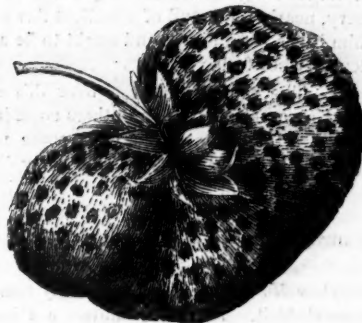


Fig. 2.—HEART-SHAPED BERRY.

Union.—This is said by Mr. Trembley to be a seedling, while others claim that it is Trollope's Victoria, and some say that it is the same as Boyden's Mammoth. According to Mr. Trembley it is far more productive than the Victoria. It is very possible that a variety may produce a seedling identical with the parent in every respect, save one, and that this may be a seedling from the Victoria which resembles it in berry and foliage, but is a better bearer. The fruit is of good size, fine color, hollow at centre, soft, juicy and of not high flavor. Its showy qualities will make it a good fruit to market near by.

Scotch Runner, known also as *Pine Apple*, and by several other names.—There can scarcely be a handsomer berry than this; it is of rather small size, conical shape, brilliant scarlet color, and the surface is beautifully honey-combed by the depressions in which the seeds are sunken; it is soft and flavorless, but still marketable.

Boston Pine.—White, of good size, but very irregular surface; has a tendency to coxcomb, and as it is very hollow, not worth cultivating.

Russell.—A distinguished cultivator writes "Russell in the plant, blossom and fruit resembles McAvoy's Superior. The Russell is more productive and I think will prove a surer bearer.

Its flavor is not first-rate, and it has a very large core, or "hollow where the core ought to be." This hollowness was noticed by us the first season it was exhibited, but this year we have examined specimens from a half dozen different cultivators and find them uniformly solid. Perhaps culture makes the difference. The chief faults with this plant are, that it does not hold up its fruit, and it is pistillate, but it is very productive and may be set down as good.

Empress Eugenie.—Solid, juicy and very acid. It coxcombs badly, and is generally considered as not worth cultivating.

Agriculturist.—Sufficient has been said of this fruit in last month's paper. As combining every good quality it has not its equal among native or imported fruits. We have seen no large berry which can compare with it for flavor, solidity, hardness, and productiveness.

Buffalo Seedling.—A single specimen grown in a pot was exhibited by Francis Brill of Newark, N. J., who thinks it not different from the Russell. It is not fair to judge of it from what we have seen. It appeared to be a medium sized, solid, juicy berry, and the plant had a fair show of fruit for one of its size.

Fillmore.—This is thought highly of by some. As exhibited here, it is a fair, sweet fruit, rather lacking in flavor, with a hollow core.

Lady Finger.—This as shown by Mr. Williams was quite different from a berry of the same name from Mr. Heins, which last the Committee decided to be Scott's Seedling. The berry shown by Mr. W. is of a good conical shape, remarkably heavy, nearly solid, and of excellent flavor; with him it is a good bearer and ought to be an excellent market fruit.

Bartlett.—The same doubt rests over this as over the Union. Mr. Fuller and others consider it the same as the Boston Pine, while some regard it as a distinct variety, and an equally different opinion is held with regard to its bearing qualities. It is of good size, tolerably solid, of a very high flavor, and as far as the fruit is concerned, it is first class.

Vicomtesse Herbart de Thury.—An ugly name for a good fruit. The berry shows a slight tendency to become coxcombed, it is of good size, and of a high and peculiar flavor. It is a fine bearer, and likely to become a favorite.

Ward's Favorite.—An old fruit, but not much disseminated. It is pistillate, of medium size, rich and sweet, a little dry, a moderate bearer.

Green Prolific.—One of Mr. Boyden's Seedlings. Very productive, but pistillate; of a globular form, solid, a little soft, and, from the specimens shown, rather acid, but well flavored.

Brooklyn Scarlet.—One of the Tribune berries, and twice took the first prize for flavor. It has a fine shape, surface, and color, and being a good bearer, will probably become a favorite.

Mead's Seedling.—A conical, medium sized berry, not very firm, but of good flavor. Pistillate.

Emily.—A seedling by Prof. Huntsman, which took a prize at the Exhibition. We saw only the Exhibition specimens, which were of good size, rather soft, acid, but of very high flavor.

Monitor.—A great bearer, and a solid berry, but as the specimens were not well ripened, we could not fairly judge of the quality.

Honneur de la Belgique.—Very much mal-formed and grown in all sorts of shapes; good, otherwise. A poor grower, and not a good bearer.

Lenning's White.—Best of the white berries. The fruit gets a strong blush in the sun.

Rippowan.—This is a seedling by J. W. Faulk-

ner, Stamford, Conn. This has the general appearance of the Austin. It is a large, soft, cox-combed fruit, of a very good flavor.

Marguerite.—A well shaped fruit, with a very rough surface, and only fair in flavor.

Progress.—A hollow, roundish berry, not well flavored, it is quite late, and said to be a good bearer.

Triomphe de Gand.

—This in some localities sustains its high reputation, though we hear

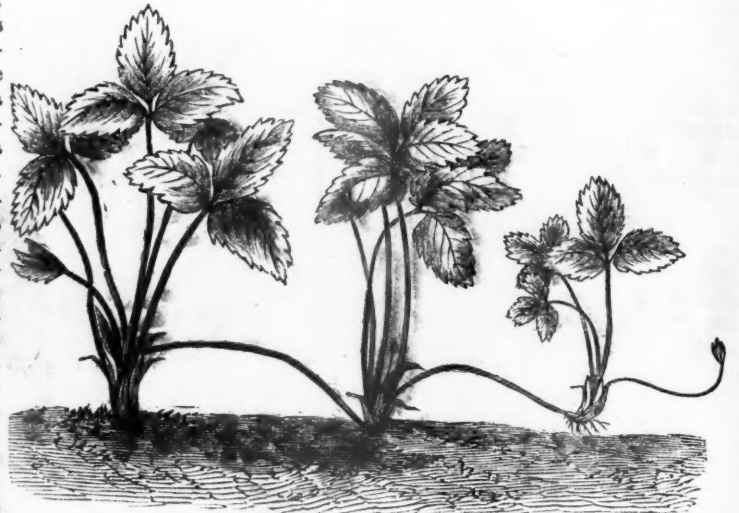
complaints of its bearing qualities, and know of its being abandoned in other quarters. It needs high culture, and where it does well it is found a profitable market fruit, as it brings a high price. Its firmness is one of its best qualities; it bears transportation to a great distance. When large, it is of a bad shape, and its peculiar flavor is disliked by some. Still it has many good qualities, and it retains its place as a standard variety.

Wilson.—Hard, very prolific, sour, as picked for market, but when fully ripened is of fair quality. One of the best for field culture. It becomes of a dingy color and the hulls blacken a few hours after picking, which peculiarities are against it as a market fruit, still it is more generally cultivated around New York than any other of the large varieties.

Austin.—A good bearer, rather late, stands drouth well and yields large and showy fruit, which is often coxcombed. Good family fruit, but too soft for marketing at a distance, it soon bruises and loses what little flavor it has.

Producing Strawberry Plants.

Those who can get plants enough to set out a bed have only to select good garden soil, not too stiff, spade it deeply, and if not already rich, work in a dressing of barn-yard manure; or if the soil is sandy and deficient in vegetable matter, a supply of muck or leaf mould should be added. In garden culture beds four feet wide with walks between them two feet in width, are found to answer the best. Three rows of plants are to be put upon such a bed, one row down the center, and a row at eighteen inches distant upon each side of the center row; this will leave the outer rows six inches from the edge of the bed. The plants are to be set eighteen inches apart. This will allow of weeding and all other operations connected with their culture without trampling the soil around the plants. In field culture the plants should be set in rows which are sufficiently far apart to allow the use of the cultivator or horse hoe. Two and a half feet will be found to be about the proper distance with the plants a foot apart in the rows. But this article was intended for those who get a few plants and wish to multiply them as rapidly as possible. Those who receive the *Agriculturist* plants as well as those who wish to make a beginning with other kinds, desire to know how to make the most of a few plants. We hope that there will be no reader of the



MULTIPLYING STRAWBERRY PLANTS.

American Agriculturist who has sufficient ground to make a bed who will consent that his family shall be without this most delicious fruit. If any one has applied to receive the *Agriculturist* plant, he will get it early next month, and will have a point to start from; or he may instead of this, or in addition to it, order from a nurseryman a few plants of any desirable variety. The postal facilities are now such, that a dozen or more plants can go by mail at a very small cost. If one or more plants can be had in good condition, then a future stock is secure, for with proper management they can soon be multiplied many hundred fold. When plants are received, unpack them at once, and pick off the decayed leaves, if there be any. If the bed is not ready, put the roots in moist soil, in a shady place. It is to be borne in mind that where there are a few plants, the object is to multiply them as rapidly as possible, and a different treatment is required than for those which are to bear fruit next year. To produce new plants, it is best to make the soil very rich with barn-yard manure, spaded in and put upon the surface. Having prepared the ground in this way, whether for one plant or several, the next thing is to set out the plants. Two feet apart each way is none too far for plants in a propagating bed. In setting out the plants, it must be borne in mind that there is a right way and a wrong way about every thing. One man will take a single plant and make a hundred or more from it, while others will fail altogether. The setting out of the plants requires care; the roots may be stuck into the ground and the plant may grow, but to be sure of it, it is best to take a little pains. To set out a strawberry plant, make a shallow hole four or five inches in diameter, and as deep as the length of the roots. In the center of this hole make a little hillock and set the plant upon it, letting the roots extend down the sides of the hillock, and then fill up with rich soil, taking care that the crown of the plant is not covered, and also to leave the whole far enough above the general surface to allow for the settling of the earth. As several have asked how strawberries are propagated, we have had an engraving made from a living plant to illustrate the peculiar manner of its growth.

When the plant gets well established it will form runners, which are long branches, so weak that they lie upon the ground, each having a bud at the end. This bud, in contact with the soil, will form roots, throw up a tuft of leaves,

and become independent of the parent. As soon as it has fairly rooted, the runner connecting it with the old plant may be severed, as it is now able to support itself. This new plant when fairly rooted, and often before, will push out other runners, which will repeat the process, and thus it will go on, so that in favorable seasons and in good soil, the parent will be surrounded with a large progeny. The engraving shows at the left hand the original plant, next at the right a new one well rooted, still further to the right, a plant forming, but not yet fixed in the soil, and a runner from this last terminated by a bud which has not yet developed. Success in multiplying a variety depends upon making the plant push out the greatest number of runners and in inducing as many as possible of these to take root. Hence the reason for highly manuring the propagating bed—as this not only induces the formation of runners, but greatly facilitates their rooting. It often happens that the wind blows the runners about and interferes with their taking hold of the soil, and it is well to throw a handful of earth upon the middle of the runner to hold it in place. Plants set out in September will generally produce well rooted new ones, which may be removed in October, and these will give a moderate crop of fruit the following spring. In removing young plants, care is to be observed to avoid waste. If the center plant in the figure were removed, the unrooted one beyond it, as well as the bud, which might have made a plant, would be lost. With common varieties where there are plenty of plants, no great care is taken, but with a rare sort it is necessary to see that every plant not yet rooted, and every bud, is left with a well established plant to support it until it makes roots of its own. If small pots filled with earth are set in the bed the runners can be made to root in them, and the plants can be removed with little disturbance to their roots, as the ball of earth can be turned out and set in the fruiting bed. In October, when there is little probability that the bud at the extremity of the runner will root, the runner may be cut off near the plant from which it starts, and inserted in the soil like a cutting, taking care to have the bud just at the surface. Treated in this way and slightly covered during winter, these buds, which would otherwise be lost, will generally make new plants. Before the ground freezes, give all the beds a covering of straw or litter, but do not cover the crowns of the plants more than an inch or two.

The Leatherwood or Wicopy.

(*Dirca palustris*.)

Many of the shrubs found growing wild in our woods and swamps, when placed under the care of the cultivator, become objects of beauty. In the crowded thicket, where they are obliged to struggle with others, they are drawn out of shape, and they give, in that condition, no idea of the beauty they will present when they have free space in which to develop, and the hand of a skillful gardener to prune their irregularities of growth. American shrubs have received very little attention at the hands of our nurserymen, while in Europe they are highly prized and largely cultivated. Much of our nursery stock of this class is imported from European nurseries. The Leatherwood or Wicopy is found throughout the northern States, and is more worthy of attention as a lawn shrub than many exotic species now in cultivation. It grows from three to six feet high and as its branches



LEATHERWOOD OR WICOPY.

start horizontally from near the ground, it forms a fine compact globular mass of verdure. The young branches have a peculiar appearance, being much larger at the joints than they are below. The bark of this shrub is exceedingly tough—whence the common name of Leatherwood—and is very useful for thongs and withes. The strength of the bark is such that a man can not break that which surrounds a very small twig. The plant belongs to the Mezereum family, and its bark in common with others of the same family has a very acrid, burning taste when chewed, and readily causes vomiting. The shape of the young leaves is shown in the engraving, but when fully developed, they are more oval; they are of a rather pale green and are whitish on the under side. The flowers appear early in spring, and usually fall before the leaves expand, though in shady situations we have found them retained until after the leaves appeared; they grow in threes with the short flower-stalks joined at the base. The flowers are without petals, the showy part being a tubular calyx, which is about half an inch long, and of a light greenish yellow color. They are produced in sufficient numbers to make the plant quite showy when in flower. The fruit is a small one-seeded berry. The shrub will succeed best in a soil containing considerable veg-

etable mould. The description and engraving will enable any one to recognize it in its wild state. Young plants may be removed from the woods and it may be propagated from seeds or by layers which take two years to root. In our experience it is perfectly hardy even on an open lawn—a trying place for many of our native shrubs and trees, especially natives of thick woods and banks of streams. The lawn is dry and hot in summer, swept by winds and bare of snow in winter, yet the Wicopy thrives and forms dense heads.

THE PETUNIA AS A POT PLANT.—We are so accustomed to grow this as an annual, that but few are aware that it is really a perennial which flowers the first year. It is usually sown in masses as a bedding plant, and as such it serves a good purpose,

making a brilliant show of flowers throughout the season. Its long trailing branches cover a great space, and as most of the common varieties seed freely; the plant is self-sowing. When grown as a pot plant, the petunia becomes a kind of shrub, susceptible of being trained according to the fancy of the cultivator. For decorating the balconies, verandahs, etc., there is nothing more satisfactory than some of the finer kinds of petunias grown properly. We prefer some of the new blotched and veined sorts; they may be grown from seeds, or more true to kind from cuttings. When once fairly started, they may be trained to form a compact bush or be spread upon a fan-shaped or other trellis. The plants bear pinching to any extent, and push out branches very freely. Do not let the plants bloom until they have taken on the required shape. If a bush form is desired, pinch out the end of the plant when it gets about a foot high; side branches will soon start all along the stem, and if any of these are disposed to outgrow the others, they are to be stopped by pinching. A few weeks training will bring the plant into the desired shape when it may be allowed to bloom.

Take Care of the Peaches.

Though our western friends mourn the loss of their crop of fruit by the severe cold of last winter, the peach growers around New-York congratulate themselves that the present promise of fruit is better than it has been for many years past. Peach trees are very apt to overbear, and the fruit needs thinning, not only for the safety of the tree, but for its own increased market value. It is the experience of the best growers that it pays to remove from one half to two thirds of the young fruit, as what remains will be finer and larger, and bring more money than if the whole crop had been allowed to ripen.



A Native Woody Climber.

(Celastrus scandens.)

For covering screens and trellises, and for shading verandahs, the woody climbers are particularly valuable, inasmuch as their foliage is produced early in the season, and they are available for these purposes much sooner than the herbaceous or annual ones. Every one must have noticed in autumn the beautiful clusters of scarlet and orange fruit which hang from the trees and fence rows, and which are commonly known as the fruit of the Wax Work or Climbing Bittersweet, (botanically called *Celastrus scandens*),—one of the finest woody climbers of this or any country. It is a very free growing plant, and in its wild state attains the height of twenty feet or more, and is found in abundance in woods and thickets, twining around trees with such force as to seriously interfere with their growth. It is not unusual to find its stem half imbedded in the substance of the trunk. On account of the pertinacity with which it entwines trees and the mischief which it does, the Germans call it the "tree strangler." This peculiarity however, only adapts it all the more to ornamental purposes, as it clings to supports without any aid. The leaves, the form of which is well shown in the engraving, are of a fine lively green. One of the flower clusters is also shown. The stamens and pistils are in separate flowers, either on the same plant or on distinct plants. A magnified staminate flower is shown separately. The flowers are of a pale, yellowish green, and not at all conspicuous, but their lack of beauty is more than compensated for by the showy fruit clusters in autumn. Three of the pods are shown in the figure; they are of a fine orange color, and they split into three parts and expose the seeds which are enveloped in a rich scarlet pulp which shows off finely against the light orange of the pod. We know of a place near Boston where the ample verandah has rough cedar posts which are completely surrounded by this plant, forming beautiful pillars of verdure in summer, and are in a blaze of scarlet and orange in autumn. Plants taken from their wild localities grow readily, or they

may be propagated from seeds or layers. In its wild state the *Celastrus* is found growing most luxuriantly in moist and shaded situations, but it adapts itself to any garden soil; a sandy spot should be enriched with leaf mould or muck.

Two Troublesome Weeds.

Illustrations are here given of two small annoyances to the farmer and gardener, which seem to many to exist merely to try one's patience, though we believe that they are of great use in showing that the soil needs stirring. Fig. 1 is the Carpet-weed, showing a young plant of the

consist of a five-parted calyx, three stamens, and a pistil, having three stigmas, which ripen into a many-seeded, three-valved pod. The botanical name is *Mollugo verticillata*; the first name being supposed to be derived from *Mollis*, soft, and the second having reference to the whorled or *verticillate* appearance of the leaves. This plant is found mostly in rather sandy soils, appearing very small at first, but from its peculiar manner of growth soon covers the surface, if neglected. In moist soils it is replaced by the chickweed, a member of the same family. Both weeds are annuals, and are never to be found but in neglected grounds, and in lands subject to annual overflow. Fig. 2 shows a small branch of the everywhere abundant Purslane, which though so common all through the country is believed to have been introduced from Europe. We have however a wild species west of the Mississippi which is undoubtedly a native. The reddish, fleshy stems and the thick green leaves of the purslane are striking, and were the plant not so common, it would be considered beautiful. The flowers are small and yellow, but as they open only in sunshine and remain expanded but a short time, they are likely to escape general notice. The pod opens when ripe by a sort of cover, and exposes numerous little kidney-shaped seeds, which when examined by a magnifier are found to have the surface beautifully marked with little depressions. There is something worth observing even about so common a weed as this. The name purslane comes from an old French name for the plant, *pourcellaine*; its botanical name is *Portulaca oleracea*. The derivation of the generic name, *Portulaca*, is not known, but the specific one, *oleracea*, comes from the Latin *olus*, a pot-herb, and indicates that purslane has been used as food. Indeed its use as a pot-herb dates back through "all antiquity." It is now used to some extent, especially by old fashioned people, who have not found out that there are better things, and several new

Fig. 1.—CARPET-WEED (*Mollugo verticillata*.)

natural size. It at first appears as a small cluster of leaves, which throws out slender branches in every direction, these soon fork and form two other branches, producing a rosette of leaves at the point of subdivision. The branching goes on in this manner, the whole keeping near the surface of the ground and covering it so completely as to render the name of Carpet-weed particularly appropriate. The flowers, which are produced in the axils of the leaves, are so inconspicuous as to be almost microscopic. They

and improved varieties are named in the European seed catalogues. When used for "greens" the plants should be taken when six inches high. We have lived where cultivated vegetables were not to be had, and found that a mess of purslane was not to be despised as an addition to a continuous diet of salt meat. The *Portulacas* cultivated in the flower garden, are from South America; they have much larger flowers of various colors, and cylindrical leaves. All of this genus have a wonderful vitality. We

Fig. 2.—PURSLANE (*Portulaca oleracea*.)

have kept specimens between paper for weeks, for the purpose of drying them, and then found that they were alive and would grow. This fact shows the necessity of preventing the plants once hoed up from rooting again. In the garden they can be raked out and taken to the hog pen, but in field culture this can not be done. There the weeding should be done on a hot day; one skillful with the hoe usually manages to completely invert the plant after cutting it up.

THE HOUSEHOLD.

Household Hints for August.

Hot weather, busy days. Get as much of the housework as possible done in the cool of the day. Sponge the bread at night, that it may be ready to mold into loaves in the morning, and do other baking at the same time. If you have washing to do, soak your clothes over night, and boil them up in the morning after a partial rubbing, for clothes much soiled, or use erasive soap and a spoonful of sal-soda in the boiling suds, to save a great deal of rubbing. Remind your husband that a good washing machine and wringer would be acceptable as soon as he can afford it. When baking or washing is to be done, provide beforehand for breakfast that it may be prepared with little trouble. If the baby keeps you awake nights, go to bed early. Nature exacts severe penalties for violated law. Clean floors in the morning, and iron after tea. Put your house in order immediately after breakfast, and before retiring at night. Begin to think about next winter's comfort, and so always have knitting or something ready for leisure moments.

Two Ways of Governing Children.

The best government of children is that which trains them to properly rule themselves. A boy who refrains from wrong only or principally because he fears the rod, is in a fair way to ruin; when he has grown too large to be whipped, restraint will be gone, and he will hasten to gratify his passions all the more fiercely because of the previously enforced denial of indulgence. The constant effort of parents should be to teach children that inconvenience, pain and misery are the natural consequences of transgression. Merely repeating this day after day to a child will not be sufficient to implant it as a principle of action. It may be thus impressed on the memory, but not on the life. Children learn to avoid physical danger, first by experiencing the pain resulting from it. No child will let fire alone merely from being told that it will burn; but after he has once or twice felt the smart, he will not only shun the flame, but he will be more likely to heed future warnings, both of

this danger and of others against which his parents may caution him. If his constant experience be that transgression of the commands and disregard of the counsels of his guardians are inevitably followed by evil consequences which he can feel, and that his pain is the direct result of his infraction, he will ultimately be convinced of the superior wisdom of those in authority over him, and of their just and kind motives in imposing restraint. "I always whip my boy when he disobeys me, and yet I can not make him mind," was the reply of a parent to the writer, when urging the necessity of proper discipline. In this case, and it is one of thousands, pain followed disobedience not as a direct result, but only as an arbitrary and temporary consequence. The boy might feel that perhaps the whipping came merely because the father was displeased, and console himself with the reflection that at some day he would be too big to whip.

Oras is more frequently the case, the thought might be, "I will look out and not get caught next time." As an illustration of another and better mode of treatment take the following, which occurred under the writer's notice. A lady had placed a quantity of grapes in a closet for safe keeping until she could preserve them. Her little boy found them, and sily helped himself so liberally that the loss was noticed. He was called to account, plead guilty, for the proof was strong, and received not a whipping, but the following just sentence. "I am sorry you chose to take your share of the grapes sily and dishonestly, when by waiting a little you could have enjoyed them with the rest of us, and without fear or shame. Of course, you can not expect any more, having eaten your portion, and I shall not allow you to have them." The sentence was faithfully carried out. Every time the preserved grapes came upon the table the little fellow felt not only the deprivation of the luxury, but he could trace the natural and just connection between his sin and its punishment, and the lesson was remembered longer than a severe whipping would have been. A boy who should refuse to bring water or cut wood or milk the cows, or do other similar work, would be more successfully treated by being denied his share in the benefits of these operations, than by scolding or whipping. Thus in most cases of discipline, the punishment may be so directly connected with the offence, that the child will wish to escape the effect by avoiding the cause, and learn to do this habitually; and when this is done, a long step is gained toward the practice of self government, and a foundation of good principles is laid for his continuance in well doing when parental control can no longer be exerted.

Management of Domestics.

The scarcity of "good help" is only equalled by the infrequency of good mistresses. The few who know how to manage domestics, usually have faithful service, so that in general more than half the blame for servants' faults should be shared by their employers. This may seem harsh, but remember, that the employed are, as a class, of inferior capacity, needing direction, and most likely to go wrong without it. From her position the mistress has it in her power to guide those not determinedly intractable or helplessly stupid, and it is her duty to do it,—failing in this she sacrifices much domestic comfort, and inflicts positive injury on her dependents. A large proportion of servants are foreign immigrants, ignorant of our customs, needing to be taught almost every thing pertaining to house-keeping, and requiring no small stock of patience on the part of those who undertake the task. Lack of this quality is the beginning of half the house-keeper's troubles. Something goes wrong, and the girl at once "gets a scolding." In most cases, kindly pointing out the error, showing a personal inter-

est in the improvement of the girl, and judiciously praising every attempt at better performance, will keep alive not only kindly feeling but a constant endeavor to please. The girl should be plainly directed as to what is expected of her, and there should be an inflexible requirement of obedience to all household regulations. This may call for no little firmness, but it should be so blended with gentleness that no needless opposition be provoked. Human nature everywhere rebels against harshness, but is attracted by kindness of manner. A judicious mistress will plan to lighten the labors of her domestics. A girl who sees a disposition on the part of her mistress to make work merely to keep her busy, will very naturally and justly take it as easy as possible. If, however, there be a prospect of finishing up, and enjoying a little leisure each day, it will stimulate to cheerful and active performance of duty. Service at housework, is at best, not an inviting employment, not one which parents would generally choose for a daughter; let this fact be kept in mind, and have its influence in awakening feelings of sympathy as well as inciting just dealing toward those whom circumstances have placed in the position of domestics.



New Vessel for Cooking Vegetables, etc.

The engraving represents a simple but useful contrivance for cooking vegetables, or other articles, which was devised and patented by a lady, Mrs. C. Britain, St. Joseph, Mich. It is a tin kettle with a perforated bottom and having a movable cover. It is designed to set into another common iron kettle. Feet are attached to the bottom to raise it from contact with the water when it is desirable to cook the contents by steam, which in many cases is a great improvement. The top has an orifice to which is attached a tube that may be carried into an opening in the stovepipe, through which odors from articles being cooked may escape; this in some instances is highly desirable, as for instance in cooking cabbage, turnips and onions. The use of this contrivance will also obviate the necessity of lifting off a heavy iron pot, to remove the contents, as the whole can be readily lifted out with the inner kettle. We are not informed as to the cost of this boiler, but from its simple construction, judge that it can not be very expensive. It is a convenient apparatus for use in the kitchen.

POLITENESS can not be learned from books of etiquette; to be genuine it must spring from a desire to bestow enjoyment, from a loving disposition. When this is trained to observed minor courtesies, it gives a charm and polish which attract in every sphere. It will be at once recognized by all, in court or camp, in the drawing room or the cottage. It will shine out not like the reflec-

tion from polished steel glittering but cold, but will beam as from inner depths like the light of the diamond, which cannot be successfully imitated.

Conveniences in a House.

Molly Greenfield, writes to the *American Agriculturist*: "Mr. A. is building a new house. He has been doing so for a long time. His means were limited, and he could not finish it all at once, so it has been slowly growing toward completion, much of the work being done by himself in his leisure; for although a farmer, who works on his own land with the boys, he is a mechanical genius. It is not every one who knows how to build a good farm house; things need to be handy for business. Mr. A.—whose wife has had something to do about the matter—has hit the nail pretty squarely on the head. The house is large, high, mostly of brick, well built, and presents a fine appearance; cellar under the main building, large and light—think he has a dark room partitioned off for roots: potatoes, perhaps most farmers know, turn green and grow watery, exposed in a light cellar. Here is an arch with large kettles for making soap, etc., and just at hand a well made leach tub, and a fire proof smoke and ash house, in one corner. Mr. A. has a rail-road on which to get things into the cellar. Farmer's wives would like Mrs. A.'s kitchen I think. It is of good size; what woman likes to roast in a little "tucked up" kitchen, cooking for harvesters in summer? Adjoining the kitchen is a small sink and wash room, a pantry, and a meal room with chests for flour and meal, kneading shelf, (drawer beneath), etc. There is a door into the meal-room from the wood-shed, so that flour can be brought in and emptied without being scattered over kitchen and pantry. Back of the kitchen stove is a permanent wood-box, built partly in kitchen and partly in wood-shed, to be filled from the latter, and the wood being removed into the former through a hinge door or cover. There is also a niche for the honest old clock that has served faithfully about thirty years, and so far as I know is good for thirty more—a niche with a door for the gun, two or three cupboards, several drawers in the wall for work, etc., a china closet, and shelf for any purpose required. The kitchen is very well lighted—who wants to work in a dark room? Farmers' wives spend so large a portion of their lives in the kitchen that it should be one of the brightest—pleasantest rooms in the house. I don't know but they would be thought strangely out of place, but I would have flowers and pictures and maps there, little 'loop-holes to let the sunlight in,' and snatch a pleasant thought from, while the weary mother toils for her family, or the 'hired girl' faithfully performs her round of duty. And then too, where the mother is, there the babies will be, and where children are there should be a great deal of brightness, beauty, and much to instruct."

To "Crystallize" Grasses, Flowers, etc.

Several correspondents have inquired how bouquets of dried grasses, flowers, etc., may be covered with small crystals, so as to present the appearance of frost work. Usually we do not admire ornamentation of this kind; it looks artificial and unnatural; but as it is quite in vogue in some sections we give the directions. Dissolve 14 ounces of alum in a quart of soft spring water, (observing proportion for a greater or less quantity,) by boiling it gently in a close tinned vessel over a moderate fire, keeping it stirred with a clean stick until the solution is complete. When the liquor is almost cold, suspend the object that is to be crystallized, by means of a small thread or twine, from a lath or small stick laid horizontally across the aperture of a deep glass or earthen jar, as being best adapted for the purpose, into which the solution must be poured. The respective articles should remain in the solution twenty-four hours; when taken out they are carefully to be suspended in the shade and remain until perfectly dry.

When the objects to be "crystallized" are put into the solution while it is quite cold, the crystals are apt to be formed too large; on the other hand should it be too hot, the crystals will be small in proportion. The best temperature is about 65° of Fahrenheit's thermometer. Among vegetable specimens that may be operated upon, are the moss rose, the hyacinth, ranunculus, garden daisy pink, and a great variety of others; in fact, there are few subjects in the vegetable world that are not eligible to this mode of ornamentation.

The fitness of the solution for the purpose may be ascertained by putting a drop of it on a slip of glass, and seeing if it crystallizes as it cools, if so, the solution is sufficiently strong. Then twist around a sprig of a plant, a cluder, or a wire ornament of any kind, some cotton, or still better, some worsted. After being immersed, as already directed, the surface of the whole will be found covered with beautiful crystallizations.

Recipes for Dyeing.

Mrs. S. A. Macerackin of Fairfield Co., O., sends a number of recipes, which seem to be sensible and in the main founded upon correct scientific principles. Mrs. M. says that in 1830 she wove a carpet, of yarn dyed according to these directions, and though it has since been subjected to constant wear, the colors still hold good. Rain or other soft water should be used in these recipes, and the yarn be thoroughly rinsed after dyeing.

Madder Red. (Tried only on woolen yarn). For 2½ lbs. yarn take ¾ lb. alum, 1 quart of bran, and 1 lb. of madder. Dissolve the alum in sufficient water to cover the yarn, and boil the yarn in the solution for two hours, and then rinse, wring and dry it. Boil the bran with two gallons of water and strain, add the liquor to the madder, which has been soaked the preceding night in strong vinegar, enough to wet it, add sufficient water to allow the mixture to cover the yarn and bring the whole to a scalding heat. Put the yarn into the dye and let it scald for half an hour without getting hot enough to simmer. When the yarn is removed from the dye it may be made of a bright red by washing in soap suds, or it may be made crimson by dipping it in weak lye slightly warmed.

Pink.—For 2 lbs. yarn, take ¾ oz. of cochineal, 1½ oz. cream of tartar and 3 oz. of chloride of tin. This last may be had at the drug stores under the name of muriate of tin, or tin mordant. Soak the cochineal in a quart of warm water, and add it to warm water enough to cover the yarn, add the cream of tartar and chloride of tin, and throw in the yarn and boil until the desired color is obtained. Double the cochineal will make scarlet.

Yellow.—Make a strong decoction of black-oak bark, enough to cover the yarn, and for each lb. of yarn add ¼ lb. of alum, and 1 oz. of chloride of tin. Boil until the proper color is produced.

Orange.—Proceed as for yellow, but add madder in sufficient quantity to produce an orange color. Or instead, for 1 lb. of yarn take 1 oz. annatto, and 1½ oz. of pearl ash. Slice the annatto into 3 quarts of water and dissolve the pearl ash in an equal quantity, and mix the two liquids and boil. Put in the yarn and simmer 15 or 20 minutes, and wash it in strong soap suds as soon as it comes from the dye.

Dark Brown.—Into a vessel large enough to contain the yarn, put white-walnut bark enough to half fill it. Fill up the vessel with water and boil for an hour. Take out the bark and put in the yarn and boil. Remove the yarn and air it, and if not dark enough dip it in lye, increasing the strength of the lye if a very dark shade is wanted. A reddish brown may be given by adding a handful of camwood to the above.

Light Brown.—Proceed as for dark brown, using white-ash bark instead of walnut, and dip the yarn in strong lye. The yarn as it comes out of the dye, may be nearly white, but the lye will darken it, and if one immersion is not enough, dip it again. The

lye will not injure the yarn if it be thoroughly rinsed afterwards.

Camwood Brown.—For 2 lbs. of yarn boil 1 lb. of camwood, in water sufficient to cover the yarn, until the color is extracted. Put in the yarn and boil until it has taken the color, then remove it, add to the liquor ¾ oz. oil of vitriol, and put in the yarn again and simmer. If not dark enough, add 1 or 2 oz. of blue vitriol and simmer until the desired shade is obtained.

Blue.—One ounce of pulverized Indigo dissolved in 6 oz. of concentrated oil of vitriol makes what the druggists call Sulphate of Indigo, and what is known to the old fashioned dyers as "chymic." If the indigo be good and the acid sufficiently strong, the solution may be made in a glass bottle. For fear of failure in both of these particulars, it is as well to buy the Sulphate of Indigo ready made from the drug stores. For 1 lb. yarn, dissolve ¼ lb. alum in sufficient water to cover the yarn, add a little of the Sulphate of Indigo, put in the yarn, boil for a short time and rinse well. The depth of color may be graduated by using more or less of the Sulphate of Indigo.

Green.—Prepare a yellow dye of black-oak bark, as directed above, add gradually the Sulphate of Indigo, until the proper shade of green is produced, put in the yarn, stir well and let it boil.

Lilac or Purple.—For each pound of yarn dissolve ½ lb. of alum in sufficient water, and simmer the yarn for 2 or 3 hours. Make a dye of ¼ lb. Nicaragua wood for each lb. of yarn by boiling out the wood in sufficient water. Put the yarn from the alum water into this dye and boil from 15 to 20 minutes, remove and drain it, dip in strong lye and rinse well in cold water.

Influence of Colors upon the Complexion.

The following suggestions on the choice of colors suitable for various complexions are taken from "Youman's Hand-book of Household Science," a work we have repeatedly and deservedly commended for its valuable and interesting treatment of subjects pertaining to every household. "Any colored objects, as bonnet trimmings or draperies, in the vicinity of the countenance, change its color; but clearly to trace that change we must know what the cast of complexion is. This varies infinitely, but we recognize two general sorts, light and dark, or *blonde* and *brunette*. In the blondes or fair-complexioned the color of the hair is a mixture of red, yellow, and brown, resulting in a pale orange brown. The skin is lighter, containing little orange, but with variable tinges of light red. The blue eye of the blonde is complementary to the orange of the hair. In brunettes the hair is black, and the skin dark, or of an orange tint. The red of the brunette is deeper or less rosy than that of the blonde. Now the same colors affect these two styles of complexion very differently. A green setting in bonnet or dress throws its complement of red upon the face. If the complexion be pale and deficient in ruddy freshness, or admits of having its rose-tint a little heightened, the green will improve it, though it should be delicate in order to preserve harmony of tone. But green changes the orange hue of the brunette into a disagreeable brick-red. If any green at all be used, in such case it should be dark. For the orange complexion of brunette the best color is yellow. Its complementary, violet, neutralizes the yellow of the orange and leaves the red, thus increasing the freshness of the complexion. If the skin be more yellow than orange, the complementary, violet, falling upon it changes it to a dull pallid white. Blue imparts its complementary, orange, which improves the yellow hair of the blondes, and enriches white complexions and light flesh tints. Blue is therefore the standard color for a blonde, as yellow is for a brunette. But blue injures the brunette by deepening the orange, which was before too deep. Violet yellows the skin, and is inadmissible except where its tone is so deep as to whiten the complexion by contrast. Rose-red, by throwing green upon the

complexion, impairs its freshness. Red is objectionable, unless it be sufficiently dark to whiten the face by contrast of tone. Orange makes light complexions blue, yellow ones green, and whitens the brunette. White, if without lustre, has a pleasant effect with light complexions; but dark or bad complexions are made worse by its strong contrast. Fluted laces are not liable to this objection, for they reflect the light in such a way as to produce the same effect as gray. Black adjacent to the countenance makes it lighter."

More About Bread.

Molly Greenfield writes to the *American Agriculturist*. Many farmers wives make milk or salt-rising bread, and if well made it is excellent; but it is not always as convenient to make in summer as hop-yeast bread. Hop-yeast may be kept some time in a cool cellar, and is very handy for biscuit, rolls, cake, and rusk as well as for bread. One is not obliged to keep a fire half a day for the "emptyings" to rise, with the risk of failure from carelessness, in allowing them to become too cool, or scalded. Here is a recipe for yeast which is good, something nearly like which I found in an agricultural paper a good while ago. Steep a handful of hops in a large basin of water, mix with the hop water three or four good sized potatoes boiled and mashed; also a tablespoonful of flour, half a tablespoonful of salt, and half a teacup of sugar. When cool, add a cup of brewer's yeast. Domestic yeast and molasses may be used instead of brewer's yeast and sugar. If you wish moist bread, pour boiling water on half or more of your flour, when you sponge your bread. But about Graham bread—do you ever make that? If well made it is truly excellent and wholesome. Here are two good ways of preparing it. 1. Mix wheat meal with sweet milk, roll about $\frac{3}{8}$ of an inch thick, and bake in a quick oven. 2. Mix the meal with rich buttermilk or thin sour cream, use soda and salt, drop on buttered tins in small cakes and bake quickly.

Hints on Cooking, etc.

Marble Cake.—Contributed to the *American Agriculturist*, by Charles E. McFadden, Rutland Co., Vt. For the white part, mix 1 cup of butter, 3 of white sugar, 1 of sweet milk, 5 of flour, $\frac{3}{4}$ teaspoonful soda, 1 of cream of tartar, whites of 8 eggs, and flavor with lemon extract. For the colored part, take 1 cup of butter, 3 of brown sugar, 1 of molasses, 1 of sweet milk, 4 of flour, 1 teaspoonful soda, and 2 of cream of tartar, the yolks of 8 eggs, and 1 whole egg; season with cinnamon, nutmeg and cloves: this alone makes a good spice cake. To make the marble cake, first put in a pan a layer of the spice cake, then of the white, and so on until the loaf is complete, finishing with the spice cake. The above quantity will make two loaves in six-quart pans.

Pop Corn Pudding.—This dish, the invention of which is attributed to Solon Robinson, is highly commended by him for good flavor, healthfulness, and facility of making. Crush popped corn with a rolling pin on a table, and then grind it into coarse meal in a common coffee mill: or in a mill of large size, it may be ground at once, without rolling. One pint of corn will make about sixteen pints when popped, and this will measure about eight pints when ground. To make the pudding; mix five pints of the meal with four pints of sweet milk, place it where it will warm slightly, and let it soak an hour or two. Then let it cool, and add two eggs, sugar, raisins, and spice as for a rice pudding. Set it on a hot stove and boil a few minutes, stirring it several times to get the meal well mixed with the milk. Then bake it about an hour, and serve while hot.

To Cook Cabbage.—Cut fine, add very little water, cover closely and cook until tender. Slowly drain it through a colander, season with salt and pepper to your taste, and mix with it thoroughly a table-spoonful of good sweet butter.

BOYS & GIRLS' COLUMNS.

Thoughts for Hot Weather.

"Keep cool," is no doubt very good advice at all times, particularly when the thermometer marks 100° and upward in the shade, as it has here this summer; but how can it be done? It has been amusing to the writer, to notice the different plans men have tried for this purpose. One sits by an open window, where the hot blast comes from the dusty street, fanning himself furiously, fuming and fretting at the heat, and making himself still more uncomfortable by often looking at the thermometer. Another one is trying the experiment of fighting fire with fire, by drinking punch and juleps, to heat his blood and thus keep cool! But right across the way here sits a man who does not appear to know what the weather is. He is so busy with his writing that he thinks of nothing else, and so the heat makes little impression on him. He knows the secret of keeping cool—to think about something else. This rule will apply under all circumstances calculated to excite a man and make him uncomfortable. It is related of a sportsman that for years he was unable to shoot a bird because of his nervous haste when he discovered any game. At last a friend told him, to always stop and take a pinch of snuff before firing, and by thus "thinking of something else," for a moment, he became cool, and seldom missed a shot. The mind should be master of the body, and it may become almost absolute in its control, by proper training. A sea captain was lying sick in his berth, apparently dying. Word was brought to him that the sailors had mutinied. He instantly arose, seized his pistols, and with the assistance of his officers quelled the mutiny, and afterward recovered his health. His intense determination appeared to break the force of the disease, and he was thus cured by having something else to think of so strongly, as to fix his whole attention, and to command the vital forces of his body. Would it not be an excellent arrangement, if by some means we could save some of the excessive heat of summer, to use in winter? A story is told of a simple minded farmer, who used to open his barn doors wide every hot day, to gather sunshine for cold weather, and you may smile at his folly. But a perfect plan has been arranged by the Creator for doing this very thing. The food we eat, the clothing we wear, and the fuel by which we are warmed in winter, all come from the influence of sunshine; and it is a remarkable fact that every stick of wood or other combustible will give out in burning, just as much heat as was required to produce it. The trees, and plants are all storing up sunshine to give it out again in some form for the use of man. The amount of strength derived from a pound of corn eaten as food, is just equal to the force which the heat required to produce it would give out. Thus, if that heat would make steam enough to raise a hundred pounds to a certain height, then the man who eats and digests the corn will have just that amount of power added to his body. It ought to reconcile us to hot weather to remember that it is really the harvest time of power, in which the earth is gathering and storing up a plentiful supply of future life and vigor for all creatures.

The Boys of New-York City....III.

"To go to New-York and get a place in a store" is the highest ambition of thousands of boys in the country. They envy the lot of the smartly dressed clerks who occasionally visit their neighborhood, who seem to lead such an easy life, and have plenty of money to spend. Surely it must be better to stand behind a counter in a pleasant store, and handle dry goods, and admire and be admired by the ladies, and make money fast, without hard work, than to dig away on the farm, through sunshine and storm, from early till late, day after day. It is not at all strange that some boys should think thus, for, to do them justice, they have too much reason for it. Many of them are overworked. They have little or no time for the sports which all boys love, and life on the farm seems to promise only hard work and poor pay. But there are as many and perhaps more boys overworked and underpaid in the city. The younger clerks in retail stores have to be on hand early and late, usually until ten o'clock at night, to run of errands, often until scarcely able to walk, and worse than all, to be ordered about, and often abused by the clerks next above them, who too frequently delight in using their authority to the utmost. So many persons living here wish to have their sons learn business, that they are willing to have them enter stores almost without pay, so that for years, thousands work for less than their board would cost; thus a boy from the country has a poor prospect of securing any but a very hard situation, where no thoughtful parent would be willing to place his son. Our young friends should also bear in mind what has been repeatedly said in these columns, that the truest wealth a person can get is what he can add to his own powers. Clerks

confined to their stores are apt to grow up like plants in the shade, with soft muscles, effeminate manners, weak wills, and frivolous minds. Their occupation also tends to make them selfish and not over honest; it is considered praiseworthy among them to be sharp at a bargain, which too often means to take every possible advantage in trade. Young men may overcome all these disadvantages; a few of them do, and grow up noble and worthy of all respect; but the tendency of business life as it exists in the city, is to belittle a man. This is too great a price to pay for any amount of money. Far better stick to the farm, work out strong muscles and a stronger will, an open, generous, noble nature, and a large manhood.

Habits of the Lion.

Gerard the lion tamer makes the following interesting statement of some of the peculiarities of the so-called king of beasts: "The lion treats a man very differently from any animal that he is accustomed to kill for food. If he kills a person who has fired at him, he never eats the body. If he meets, in his nightly promenade, a man well clothed in burnos, (a sort of cloak worn by Arabs,) his experience shows him that he is not a marauder, and he may either kill him for food, or, if the fancy happens to take him, he will kill him by fear, little by little, just as a pastime. In the first case, he will give him barely time to say his prayers, and then bounding on him, will crush his head with a single bite, instead of strangling him, as he is accustomed to do with other animals. In the second case, he sometimes will bar the passage of the unfortunate fellow by lying down before him, and then he will walk along by his side, purring and showing his teeth like a tiger. Sometimes he makes believe go away and leave him, and then making a long detour he will conceal himself along the path, and charge at him with a roar. Sometimes he crouches down like a cat and bounds on his victim, who gives himself up for lost, but the tantalizer only knocks him over with his paw, or, walking around him, strikes him in the face a blow like a flail with his muscular tail. At last, the victim succumbs to the agony that is greater than a thousand deaths, and dies of fear. These pastimes of the lion, that, as one can well imagine, have never been told by the victim himself, are reported by his comrades, who, having sought safety by flight, by taking refuge on rocks or trees, while the poor soul that was captured, too much frightened to imitate their example, died before their eyes, of terror, while they could do nothing for his relief but pray to the prophet, though without an answer.

New Puzzles to be Answered.



No. 93. Illustrated Rebus.—Worthy to be remembered.

No. 94. Geographical Question, by Erastus Murphy. The name of a President of the United States has been given to towns in 23 States, and to counties in 20 States; what is the name, and which are the States?



No. 95. Illustrated Proverb.—Of frequent occurrence.

Answers to Problems and Puzzles.

The following are answers to the puzzles in the July number, page 215. No. 90. Pictorial Proverb.—Of two evils choose the least. No. 91. Double Acrostics.—1st Principal Words, JACOB'S LADDER: 1, Jackal; 2, Alexandria; 3, Contraband; 4, Oppressed; 5, Battle; 6, Surrender. 2d: Principal Words, CHASE, BANKS: 1, Club; 2, Hepatica; 3, Afghan; 4, Shirk; 5, Editors. No. 92. Illustrated Rebus.—When eues' peak two ape r sun look him in the face; or, When you speak to a person look him in the face.

The following have sent correct answers up to July 5: Ed. Pills, 92; Maggie A. Grigg, 92; W. K. P., and R. W. S., 92; D. Gibbon Cutner, 92; "Lyde," 92; James B. Zahn, 92; H. H. Stryker, 92; E. P. Hamist, 92.



STANDING FOR A PORTRAIT.—Engraved for the American Agriculturist.

The manly looking lad who is standing to have his picture taken, need not be ashamed of it, if the artist draws it correctly. There is something in his face and manner which marks him as the finest boy in the group. Compare his countenance with that of the little fellow who is looking on the paper as the drawing progresses, and notice how much more strength of character it shows. He does not allow his attention to be called away from the business in hand, by the whispering of the mischievous urchin who is trying to make him turn his head, but remains steady in his position. Will this boy keep his fine face, which the artist is trying to draw? He may by continuing to be as noble and virtuous as his looks indicate; but should he permit bad passions to rule him, they will sadly change it. It is related of one of the old painters that he drew the portrait of a beautiful boy, to represent "Innocence." Many years after he wished to exhibit a picture of "Guilt," and searched through the prisons for a man whose looks would best express it. At last he found one, whose every feature was made hideous by wickedness, and painted his likeness. What was his astonishment afterward, to learn that it was the same person whose picture he had taken when a boy. Vice had left its deforming marks, and transformed the beautiful boy into a monster.—Few accomplishments which a boy may learn will yield more pleasure than the art of drawing. Some have a natural talent for it, and become skillful in it very easily; but any young person with the full use of his eyes and fingers may succeed at least tolerably well; enough to correctly represent all common objects. It is considered a disgrace not to be able to write, and the same pains taken in learning to draw would give equal success as in learning to use the pen. At times such knowledge is of the greatest use, as by it descriptions can be given and facts preserved much better than by any use of words. A good teacher may greatly aid in learning to draw, but after all, practice must give skill, and this may be had

without any instructor. Take a lead, or slate pencil, and begin by trying to draw straight lines without a ruler, then curved ones, and when this can be done with ease and precision, endeavor to copy plain figures. By persevering for an hour or less time every day, you will be surprised with your progress in less than a year.

A Mother's Hand.

In one of the fierce engagements with the rebels near Mechanicsville, in May last, a young lieutenant of a Rhode Island battery had his right foot so shattered by a fragment of shell that, on reaching Washington after one of those horrible ambulance rides, and a journey of a week's duration, he was obliged to undergo amputation of the leg. He telegraphed home, hundreds of miles away, that all was going well, and with a soldier's fortitude composed himself to bear his sufferings alone. Unknown to him, however, his mother, who had become anxious for the welfare of her son, had come to Washington. She reached the city at midnight, and the nurses would have kept her from him until morning. One sat by his side fanning him as he slept, her hand on the feeble, fluctuating pulsations which forboded sad results. But what woman's heart could resist the pleadings of a mother then? In the darkness, she was finally allowed to glide in and take the place at his side. She touched his pulse as the nurse had done. Not a word had been spoken; but the sleeping boy opened his eyes and said: "That feels like my mother's hand! Who is this beside me? It is my mother; turn up the gas, and let me see mother!" The two faces met in one long, joyful, sobbing embrace, and the fondness pent up in each heart sobbed and panted and wept forth its expression. The gallant fellow just twenty-one, his leg amputated on the last day of his three years' service, underwent operation after operation, and at last, when death drew nigh, and he was told by tearful friends that it only remained to make him com-

fortable, said "he had looked death in the face too many times to be afraid now," and died as gallantly as though falling under the enemy's fire on the field of battle.

The Value of Good Manners.

A man of good repute in Wall-st., New-York, the other day applied to a well-known citizen to rent him a furnished house. He was refused. A mutual friend expressed surprise. "He stands well on the street." "Yes." "His family are highly esteemed." "Yes." "He is known to be punctual in all his pecuniary engagements." "Yes." "Well, why don't you let him have your house, at your own price, while you are away?" "Because, he came into my parlor and sat on my sofa with his hat on. Such a man can not have habits of personal neatness. He would spit on my carpets; he would break my chair backs tilting them against the wall, and soil it with his unkempt hair. The presumption is, his family are like him at all events, and he alone could injure my furniture more in six months than would be the profits of renting. No sir! a man who sits in my parlor with his hat on, the first time he enters it, can not rent my house at any price." Let the young remember that the character will "crop out" in the manners, in the little actions of life, and that if these are unexceptionable, and if they are uniformly neat, methodical, prompt, and energetic, these qualities will prove a passport to "good places," and to that thrift which brings with it a quiet mind and length of days.

CHILD-LIKE.—A mother trying to get her little daughter of three years old to sleep one night, said to her, "Anna, why don't you try to go to sleep?" "I am trying," she replied. "But you haven't shut your eyes." "Well, can't he help it; *ums comes unbuttoned.*"

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Contributions to "Agriculturist Sanitary Fund."

[Below is a list of the contributions received up to July 1, (except some due bills and articles sent to be sold, but not yet disposed of). This money is expended through the U. S. Sanitary Commission, in furnishing care and comforts to our wounded and sick soldiers. Mr. Judd's letters, especially the one in the July *Agriculturist*, give some idea of how the money is used. Every dollar is a precious treasure to the giver, stored where it will bring unusually large returns, in the satisfaction of having done even thus much for our brave brethren in arms, and something too for our fallen enemies, for such are cared for.—Further sums received will be acknowledged hereafter.]

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Commercial Notes.

The following condensed, comprehensive tables, made up to July 16, show the transactions the past month.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days this m'th	344,000	2,127,500	773,400	36,000	37,000	876,000
28 days last m'th	357,000	3,130,000	689,000	20,200	264,000	1,779,000
SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days this month	549,000	3,978,000	1,546,000	10,300	81,000	
28 days last month	515,000	4,156,000	668,000	13,400	45,000	

2. Comparison with same time last year.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days 1864.....	344,000	2,127,500	773,400	36,000	37,000	876,000
24 days 1863.....	532,000	2,874,000	2,769,000	48,000	28,500	1,255,000
SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days 1864.....	549,000	3,978,000	1,546,000	10,300	81,000	
25 days 1863.....	411,000	2,929,000	2,266,000	93,000	11,000	

3. Exports from New-York Jan. 1. to July 16.

	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1864.....	1,091,048	7,991,145	178,235	405	22,181	
1863.....	1,339,192	7,904,547	5,871,333	318,103	104,889	
1862.....	1,532,383	8,045,042	6,612,533	849,938	22,023	

4. Receipts at Albany, by Canal, each of the last three seasons, to July 1st.

Canals opened May 1, 1862.	May 1, 1863.	April 30, 1864.	
Flour, bbls.....	387,500	402,100	224,700
Wheat, bush.....	7,543,000	5,633,500	5,626,306
Corn, bush.....	3,978,000	6,814,100	1,797,100
Barley, bush.....	892,500	53,700	137,000
Oats, bush.....	1,125,300	2,839,000	2,646,900
Rye, bush.....	291,300	91,200	64,500

CURRENT WHOLESALE PRICES.

	June 15.	July 16.
Flour—Super to Extra State	\$7 65	\$8 40
Super to Extra Southern	8 20	11 60
Extra Western	8 10	11 00
Extra Genesee	8 50	10 00
Superfine Western	7 75	9 25
RYE FLOUR	7 00	8 25
CORN MEAL	7 40	7 85
WHEAT—All kinds of White	2 00	2 12½
All kinds of Red	1 80	2 00
Corn—Yellow	1 45	1 53
Mixed	1 44	1 57
OATS—Western	91	92
State	90	91
RYE	Nominal.	1 90
BARLEY	Nominal.	Nominal.
COTTON—Middlings per lb.	1 40	1 62
Hops, crop of 1863, per lb.	15	28
FEATHERS, Live Geese, p. lb.	80	82½
SEED—Clover, per lb.	12½	13
Timothy, per bushel	3 35	3 50
FLAX, per bushel	3 35	3 50
SUGAR—Brown, per lb.	15½	22½
MOLASSES, New-Orleans, p. gal.	87½	1 00
COFFEE, Rio, per lb.	41	44
TOBACCO—Kentucky, cap. lb.	12½	30
Seed Leaf, per lb.	13	65
WOOL—Domestic fleece, p. lb.	75	88
Domestic, pulled, per lb.	65	86
Wool, California, unwashed.	30	60
TALLOW, per lb.	15	15½
OIL CAKE, per ton	55 00	63 00
POKE—Mess, per bbl.	37 00	37 50
Prime, per bbl.	32 00	32 25
BEEF—Plain mess	17 00	20 50
LARD, in bbls, per lb.	15½	16½
BUTTER—Western, per lb.	25	32½
State, per lb.	28	33
CHEESE.....	10	18
BEANS—per bushel	2 50	2 80
PEAS, Canada, per Bushel	1 40	1 45
Broom Corn—per m	12	14½
EGGS—Fresh, per dozen	22	23½
POULTRY—Fowls, per lb.	18	20
Turkeys, per lb.	17	18
PIGEONS—Wild, per doz.	1 25	1 50
POTATOES—Mercers, p. bbl.	3 50	4 00
Peach Blow, per bbl.	4 00	4 25
Prince Albert.....	3 00	3 50
New Bermuda, per barrel	9 00	10 00
DRIED APPLES, per lb.	12½	11½
DRIED PEACHES, per lb.	28	28
DRIED RASPBERRIES per lb.	28	30

At the date of our last, (June 16,) gold was quoted at 107. It has since been as high as 290. Yesterday (July 15) it fell to 242½. Such violent fluctuations in the market price of the precious metal have produced equally extreme changes in the currency values of the principal kinds of produce and merchandise. At one time, (within the month,) speculation was quite brisk in breadstuffs, provisions and groceries, cotton, wool, tobacco, hides, leather, &c., leading to a rapid inflation in prices of such articles, and checking the regular demand from home consumers and shippers. Recently the leading money

lenders have been less disposed to make advances to dealers in produce, unless at enormously high rates of interest, (ranging from 1½c. to 5 per cent a month, or equal to from \$15 to \$20 per annum, for the use of every \$100). Of course speculators could not afford to borrow on such terms, and have consequently been forced to sell out, as far as practicable, in a rapidly declining market, depressed by these efforts to realize and by the heavy fall in gold. Hence, the business of the month in all kinds of domestic produce closes up tamely and feverishly; holders being generally very eager to sell, and buyers reluctant to purchase freely. Merchants anticipate early and decisive national victories in Virginia and Georgia, which must inevitably force gold down close to its real value, and bring about a corresponding reduction in the market price of all the prime necessities of life. In view of the extraordinary fluctuation (of almost daily occurrence) in the prices of the principal agricultural products, during the past month, it would be altogether useless to enter into an elaborate review of the movements in each article. The closing currency prices of most commodities, (though in some instances far below the extreme figures ruling two weeks since,) are much higher than those obtainable at the date of our last.

Advertisements.

Advertisements, to be sure of insertion, must be received BEFORE the 10th of the preceding month.

N. B.—No Advertisement of Patent Medicines or secret remedies desired. Parties unknown to the Editors personal ly or by reputation, are requested to furnish good references. We desire to be sure that advertisers will do what they promise to do. By living up to these requirements, we aim to make the advertising pages valuable not only to the readers, but to the advertisers themselves.

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ANURSEYMAN with some capital may hear of a good situation by addressing G. W. McGREW, Park Nursery, Lawrence, Kansas.

Balloon Ascensions

Made for Agricultural Societies and other parties, on the most reasonable terms. Address ALLEN & MORNING, Aeronauts, Providence, R. I.

Morris' Concentrated Lemonade.

Price \$4.50 per doz., in cases of 2 doz.

See pages 71 and 93 March Agriculturist.

WM. H. MORRIS, Wholesale Agent,

151 Nassau Street, New-York.

Pure Italian Queen Bees.

For sale by M. QUINBY, St. Johnsville, N. Y.

Russell's Great Prolific STRAWBERRY.

I have now growing a large stock of this justly celebrated and unequalled variety, and having taken great care of the runners this season, I can fill orders with unusually strong and well rooted plants. Of the very large number of this kind sent out by me last spring, there was scarcely a failure, and the very fine order in which they were received by my customers in the most distant States and Territories, gave, as per letters sent me, entire satisfaction, many saying they were the best plants they had ever received.

Sent by mail postage paid, 30 plants for.....\$1 00
" Express at 100 ".....\$2 50
Large orders at less rates.

I have also a fine stock of all the valuable new and old varieties of Strawberries, Raspberries, Grapes, &c., and those desiring to purchase are requested to send for my price list. Correspondence solicited.

KDWIN MARSHALL,

Po'keepsle Small-Fruit Nursery,

Po'keepsle, N. Y.

A New Strawberry. MEAD'S SEEDLING.

Large, conical berry, brilliant scarlet color, glossy surface, and sweet, juicy flesh of the highest flavor. Price \$4 per dozen; \$25 per hundred. Ready this fall. For circular, etc., address PETER B. MEAD, Room 43, Moffat Building, 333 Broadway, New-York.

STRAWBERRIES.—Now is the time to plant for a spring crop. All the new sorts are now ready. Priced descriptive Catalogues of my large collection of Strawberries and all other Fruit and Ornamental Trees and Plants will be forwarded on application. Plants carefully packed and pre-paid by mail. B. M. WATSON, Old Colony Nurseries, Plymouth, Mass.

AGENTS WANTED TO SELL H. H. LLOYD & CO.'S MAPS CHARTS, AND PRINTS

TO SUIT THE TIMES.

The demand is now immense and Agents are making money very fast. Several new works are ready. The present volume of the *Agriculturist*, page 37, has the following:—

"War Maps."—We have received from H. H. Lloyd & Co., several very good maps, among them one which shows at a glance, and in an interesting form, the progress of the war, the original and the present territory occupied by the rebels, the battle fields, etc. Note that this is H. H. Lloyd & Co., 21 John-st.,—a prompt and responsible House, we have every reason to believe. Send for our new PRICE LIST and Circular. Address

H. H. LLOYD & CO.
Map and Chart Publishers,
21 John street, N. Y.

THE NEW BOOK ON THE CULTIVATION OF FLOWERS.

From the New York Times.

FLOWERS FOR THE PARLOR AND GARDEN.
By EDWARD SPRAGUE RAND, JR. Illustrated by JOHN ANDREW and A. C. WARREN. 8vo. Boston: J. E. TILTON & Co. Price, \$2.50; half calf, \$3.50; full Turkey, \$5.

Though allied to the annual tribe by its beautiful execution, the interest of this book is perennial, and will endure as long as admiration of the beauties of nature's works marks the existence of refined taste and elegant culture. It will interest all classes engaged in the raising of flowers, from the possessors of the aristocratic green-house and conservatory, to those whose share of the soil is confined to the contents of the box before the window, or the hanging basket that decorates the only room. It is, indeed, one of the greatest blessings connected with floriculture that its kindly influence may be shared by all classes, however humble may be the scale on which it is pursued. The directions given seem ample for all necessary instruction, and an ornamental charm is imparted to the volume by a profusion of faithful illustrations on wood. They will compare, without disadvantage, with any recent home or foreign specimens of the art, and give an air of elegance to the practical, prosaic part of the work. The mechanical execution of the volume could, indeed, scarcely be improved, and is highly creditable to the young house, who may take the credit of producing a *Vade Mecum*, welcome in every home of refinement.

Strong Concord, Delaware, Rogers' Hybrid, Allen's Hybrid, Creveling, Hartford Prolific, Diana, Maxatawny, Adirondack, and Iona, at low prices. We call particular attention to Rogers' Hybrid, No. 19, as the largest, earliest, and best hardy black grape yet introduced. It is a cross between the Black Hamburg and native, combining the fine flavor of the foreign with the hardiness of the native. Our vines are produced from the wood of the original vines of which we have the entire stock.

Salem, Mass., Nov. 26, 1863.
[75.] Received of Wm. Perry & Son, seventy-five dollars for all the wood of my No. 19, Rogers' Hybrid, E. S. ROGERS.
Descriptive catalogues containing a cut of Rogers' Hybrid sent to all applicants enclosing stamp to prepay postage.
Address WM. PERRY & SON, Bridgeport, Conn.

GRAPES.

Our new Catalogue for fall of 1864 is now issued, and will be sent to all applicants enclosing stamp. Our stock of

250,000

vines, grown in the open air, including all the old and new kinds of any merit, is unsurpassed anywhere.
J. KNOX,
Box 155 Pittsburgh, Pa.

Lane's Purchasing Agency. STRAWBERRIES.

Orders received for all the new and desirable kinds of strawberries.

Mr. Wm. F. Heins, one of the most successful amateur cultivators near New-York, recommends the following varieties. Early.—Jenny Lind and Downer's Prolific, \$1 per 100.

Main Crop.—Triomphe de Gand, \$1 per 100; Green Prolific, Russell's Prolific, Lenning's White, 75c. per doz.; \$2.50 per 100; Brooklyn Scarlet and Monitor, \$1 per doz.; \$5 per 100. *The Agriculturist*, 75c. for 1; \$1.20 for 2; \$3 for 6; \$5 for 12; \$25 for 100.

Late.—La Constante, 75c. per doz.; \$3 per 100.

HARVEY B. LANE,
151 Nassau-st., New-York.

STRAWBERRIES.

Send for our new Catalogue, giving descriptions of varieties that have proved the most valuable the past season, modes of culture, prices of plants, &c., &c. Our plants are grown with great care, and can not fail to give satisfaction.
J. KNOX,
Box 155, Pittsburgh, Pa.

GRAPE VINES.

My stock this season, comprising all the hardy varieties, is larger than ever before, and at present promises to excel in quality the product of any former year. So much depends upon the after part of the season that it is impossible to speak with precision upon that point at present. They will have all of the excellence that the most attentive care and skill, aided by unequal facilities in the most favorable locality for their production, can give them, and I do not hesitate to promise to purchasers the most advantageous vines—the **cheapest and best** that can be obtained both for garden and vineyard.

The full measure of success in grape culture is not attainable without some knowledge of the conditions upon which success depends.

To supply this knowledge, I have prepared two publications which embody the results of long and extensive personal experience. Although named Catalogues, the two together comprise the most thorough and comprehensive treatise on the vine that has been published in this country.

The Descriptive Catalogue, with price list, is the only publication that fully describes the characteristics and relative value for garden and vineyard of all of the Native vines that are worthy of attention. Besides a very large amount of other important matters not discussed in any other publication, it contains a chapter on the "Quality of Grapes and the education of Taste," by R. G. Pardee, a Lecture on the "Conditions of Success in Grape Culture," by Peter B. Mead, and a chapter on "Wine and Wine-making." It is illustrated with forty engravings and sent for 10 cts.

The Illustrated Catalogue is a thorough treatise on the planting, management, propagation and training of the vine in the garden and vineyard, illustrated with more than sixty engravings. It is sent for fifteen cents.

The two are also sent bound together in flexible paper covers for thirty-five cents. A large part of the engravings are taken from living vines, and are the most truthful and spirited ever published.

N. B.—The two new native seedlings are worthy of attention by every one who has place and disposition to cultivate any vines; for full description of which see Descriptive Catalogue.
C. W. GRANT,
Iona, near Peekskill, Westchester Co., N. Y.

15,000 APPLE TREES AND OTHER varieties of Fruit and Ornamental Trees. For Catalogue address G. H. BANTA, Tappanstown, Rockland Co., N. Y.

DELAWARE VINES AT LOW PRICES.

PLANTERS, who are forming Vineyards,
and

NURSERYMEN who wish plants for stock,
will find it their interest to examine the one-year-old plants of

PARSONS & CO.,

Which they offer

At the following low prices:

No. 1. \$25 00 per 100.—\$200 00 per 1000.

No. 2. \$15 00 per 100.—\$125 00 per 1000.

\$1000 00 per 10,000.

No. 3. \$12 00 per 100.—\$100 00 per 1000.

\$750 00 per 10,000.

These plants are produced from cuttings of bearing vines. The accompanying sketch of one of them will show that



they are not the mere straws so often employed, but mostly of large size. They are so grown as to ensure an abundance of fibrous roots and thoroughly ripened wood.

The testimony of those who have purchased them for the last two years is of the most favorable character.

In consequence of the low price, their stock of Delaware vines has for two years been bought up early in the autumn by a few persons. The proprietors wish them more widely scattered, and hope therefore, that those who desire to purchase, will send their orders early.

In consequence of the great difficulty in growing the Delaware the first year, nurserymen will find it their interest to purchase largely to plant for stock.

The Proprietors can also furnish other **HARDY GRAPES**, including Concord, Diana, Creveling, Iona, Allen's Hybrid, Adirondack, and other new sorts.

Address

PARSONS & CO., Flushing, N. Y.

Trees! Trees!! Trees!!!

Rare chances for large Trees. 50,000 extra fine Apple Trees 8 to 10 feet high, sorts well suited to Southern and Central Pennsylvania. Prices reasonable for size and quality of trees.

No Agents either traveling or stationary, recognized unless bearing authority from the Proprietor. Address
DAVID MILLER, Cumberland Nurseries,
Carlisle, Penn.

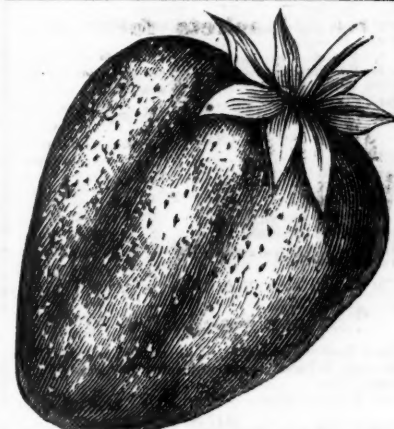
Vines by Mail.

Having raised a large stock of superior plants, I offer them at the following very low prices:

	One.	Two.	Three.	Size.	Twelve.
Delaware.....	35c.	60c.	85c.	\$1 60	\$3 00
Diana.....	30c.	55c.	80c.	1 50	2 75
Concord and Taylor. 25c.	44c.	60c.	1 15	2 20	

Free by mail. Lower by Express. Other varieties at corresponding prices. Catalogues sent free.

Address J. H. FOSTER, Jr., Box 560, West Newton, Westmoreland County, Penn.



STRAWBERRIES.

"Agriculturist." The prize berry of America.

A large stock of this fine variety for sale. 2 plants for \$1.20; 6 for \$3.00; \$5.00 per doz.; or \$25.00 per hundred, 100 plants and under, sent free by mail when desired.

Also a splendid collection of all the new and finest varieties of Europe and America. For particulars see advertisement in July number of *American Agriculturist*.

All orders addressed to
WM. S. CARPENTER,
329 Greenwich-st., New-York.

Choice Flower Seeds.

For Sowing in August and September.

B. K. BLISS,

Seedsman and Florist, Springfield, Mass.

Would invite the attention of all who are interested in the culture of Flowers, to the following list which have been carefully selected from the stock of several of the most successful Cultivators and Exhibitors in Europe, and can be confidently recommended.

Calceolarias, Extra select, from flowers which took the first prize at the late London and Continental Exhibition.....	50
do. Fine mixed, spotted and self.....	25
do. Rugosa, from the finest shrubby varieties, suitable for pot-culture or for bedding.....	50
Cineraria, Extra choice, from all the new varieties.....	50
do. Fine mixed, from the best old varieties.....	50
Gloxinia, From the finest erect and drooping varieties.....	50
Hollyhocks, (Very double,) saved from his unrivaled collection of seventy-five English varieties, if sown now will flower freely next year (100 seeds).....	25
Pansy English, Extra select, saved from the finest prize flowers.....	50
Pansy New Fancy, Very beautiful.....	50
Pansy German, (Variegated,) mottled and striped, very showy.....	25
Pansy English, Fine mixed.....	25
Primula Sincensis flumbrata, (Chinese Primrose fringed,) various colors mixed, extra quality.....	50
do do do White.....	25
do do do Rose.....	25
Pink Tree, or Perpetual Carnation, Continue in flower a long time, extra quality (20 seeds).....	50
Pink Carnation and Picotee, From celebrated German collection.....	50
Polyanthus, Finest mixed varieties from the collection of an English amateur.....	25
Mimulus, Finest mixed golden yellow and white ground, covered with crimson, rose and scarlet blotches.....	25
Mimulus tigrinoides, A new hybrid variety, flowers beautifully marked, a great acquisition.....	25
Tropaeolum, Finest mixed varieties for green-house.....	25
Stock, Scarlet and White Intermediate London, extra, each.....	25
Stock, French Cocardeau, Scarlet Purple and White, mixed, fine for winter flowering.....	25
Stock, New German Ten Weeks, Extra fine, many colors mixed.....	25
Rhodanthe Maculata, Maculata alba, Atrorubra, 3 beautiful varieties of this beautiful Everlasting, excellent for pot-culture, each.....	25
Sweet Williams, Hunt's extra select.....	25
Sweet Williams, New Auricular-flowered.....	25
Two English varieties of great merit, far surpassing anything hitherto offered.....	25
Wallflower, Extra fine double German.....	25

Either of the above named seeds, with full directions for culture, will be sent by mail, post-paid, to any address in the Union, on receipt of the price affixed, or the entire collection for \$5.

Twenty Select Varieties

Of Hardy Annuals, Biennials & Perennials,

for fall sowing, will also be sent post-paid for \$1. Orders must be accompanied with the cash. Address
B. K. BLISS, Springfield, Mass.

New Strawberries.

The following new prize European varieties imported this season, carefully packed and sent by mail at \$2.00 per dozen. *Bijou*, *Haquin*, *Hero*, *Leon de St. Leger*, *Lorenz Booth*, *Progress*, *Saronese*, *Souvenir de Kief*, *Lucida Perfecta*, *Virginie*. Those which fruited this season were very fine. "Agriculturist," 75c. each; \$3.00 for six; \$5 per dozen. *Boyd's Green Prolific*, 75c. per doz.; \$3.00 per 100; \$30 per 1000. *Russell's Prolific*, 50c. per doz.; \$2 per 100; \$15 per 1000. Carefully packed and sent by mail at the dozen price. For descriptions of these and over fifty more varieties, see my new Catalogue, mailed free to all applicants. Address FRANCIS BULL, Newark, N. J.

Fruit Baskets for 1864.

To any or all fruit growers and dealers we respectfully recommend our improved FRUIT BASKET, Patented May 31st, 1864, and known as the **Vencer Fruit Basket**.

Circulars of description and price will be furnished on application to us. A. BEECHER & SONS, Westville, Conn.

Also for sale by W. H. Carpenter, 90 Vesey-st., New-York.

Turnip Seeds by Mail.

The following varieties will be mailed post-paid to any address in the Union upon receipt of prices affixed.

10 cts.	30 cts.	50 cts.	75 cts.
1 ounce.	4 ounces.	8 ounces.	1 pound.

Early Dutch, **Snowball**, **Red Top Strap Leaf**, **White Top Strap Leaf**, **White Globe**, **White Norfolk**, **Yellow Aberdeen**, **Yellow Finland**, **Robertson's Golden Ball**, **Orange Jelly**, **Tel-tau** or **small Berlin**, **Long White French**, **White Tankard**, **Long White or Cow's Horn**, **Waite's Eclipse**, **Dale's Hybrid**, **Laings's Improved Rutabaga**, **Skirving's do.**, **Stubble Swede**.

Also **Chinese Winter Radish**. 25 cts. per ounce. **Winter Spinach**, same price as turnip seed. Please address B. K. BLISS, Springfield, Mass.

Sanford & Mallory's**FLAX AND HEMP DRESSERS**

are no longer an experiment. Over 200 No. 1 Brakes have been sold and are in

PRACTICAL USE.

A pamphlet will be sent free of charge by writing.

JOHN W. QUINCY, AGENT,
No. 98 William-st., New-York.

TESTIMONIALS.

JANESVILLE, Wis., April 25th, 1864.

Mr. John W. Quincy, Treasurer of Mallory & Sanford Flax and Hemp Machine Co., 98 William-st., New-York:

DEAR SIR.—In answer to your request for our opinion of the Mallory & Sanford Flax Brake, we would say that we have had one of them in use in our mill for the past four months, and that it works to our perfect satisfaction. We consider it the best Brake we have ever seen for straight straw, and intend ordering two more for the coming season. Respectfully yours,

BLACKWELL & MALLORY.

ORVILL, Pa., April 18th, 1864.

Messrs. Mallory and Sanford:

GENTLEMEN.—After having your Flax Machine fairly tested by competent judges, I concur with them in saying it is the most simple, the most durable, and executes its work better than any machine I have ever examined.

Yours respectfully,

S. N. BRONSON,
Dealer in Machinery and general Hardware.

DAYTON, Ohio, April 20th, 1864.

DEAR SIR.—In answer to your request for an expression of opinion in regard to the Sanford & Mallory Flax Brake, I will state that they have fulfilled my expectations. I have used them quite extensively, having used FOUR OF THEM (No. 1), for more than one year. I am able to break one ton of straw per day upon each brake, and when called for, have done more. They do the work well, and bring the lint out in good condition—much better than the old-fashioned machine. My short experience with them satisfies me of their excellence. Yours truly,

JOHN P. COMLY.

Mr. Comly has been working our machines on tangled and straight straw.—M. & S.

WEST AUBURN, Susquehanna Co., Pa., April 11th, 1864.

Messrs. Mallory and Sanford:

GENTLEMEN.—I have been using one of your No. 1 Brakes during the past winter—most of the time doing custom work. Our customers are generally, I believe, well satisfied with it. The flax dressed by it is said to be softer and finer than that broken by the old-fashioned brakes. Yours truly,

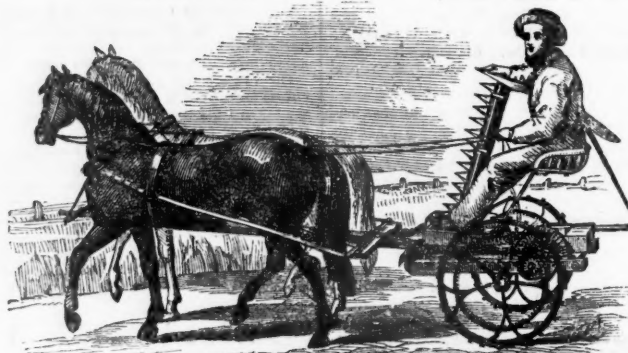
W. F. COBURN.

THERESA, Jefferson Co., N. Y.

Messrs. Mallory and Sanford, New-York:

GENTS.—We have used one of your Patent Flax Brakes for the past four months, to our entire satisfaction—producing from 400 to 500 lbs. of well scutched flax per day of ten hours, depending upon the quality and condition of the straw. Having examined the best Flax Mills in the United States and Canada, we are fully satisfied that the best machine in use for flax dressing is the Mallory & Sanford Brake. Yours truly,

J. H. HELMER & CO.

IMPORTANT TO MANUFACTURERS OF MOWING MACHINES.**THE UNION MOWER.**

The demand for the Union Mowing Machine has increased so rapidly for the last three years that the Union Mowing Machine Co. find it impossible to supply the great demand for the Machine, and have decided to grant licenses to manufacture and sell the Machine in all the States and Territories west of New-York, and south of Virginia, including the western parts of the States of Virginia and Pennsylvania.

Any person desirous of obtaining the exclusive license to manufacture and sell the Union Mower in any of the counties, States or Territories, as above indicated, can obtain descriptive pamphlets of the Machine, together with any other necessary information by addressing

UNION MOWING MACHINE CO.

Worcester, Mass.

Flax Cotton.**Machinery to test the experiment of Manufacturing Flax Cotton.**

The appropriation of \$2,000 to test the practicability of manufacturing flax cotton, to be expended under the direction of the New York State Agricultural Society, is still open to competition to all who are investigating the subject. The Society desire to call the attention of the public to this subject. The Committee appointed to examine applications consists of Samuel Campbell, New York Mills, Chairman; John Stanton Gould, Hudson, Alfred Wild and B. P. Johnson, Albany. The Committee will, on application, examine any machinery that may be presented, and the processes adopted. Notice can be given to the Secretary of the Society, or to any member of the Committee, who will furnish the necessary information.

B. P. JOHNSON, Secretary, Albany, N. Y.

To Farmers and Butchers.

We are now manufacturing patented implements, for catching swine and other animals, without venturing near them. They are invaluable for securing wild or vicious animals. Numerous testimonials have been received from persons using them, and each one is warranted to give perfect satisfaction. We will send by express, single machines, where hardware stores are not supplied, on receipt of **One Dollar**. Usual discount to the trade. Send for Illustrated Circulars. GOLDSMITH & GREGORY, Goshen, N. Y.

The Best and Cheapest Farming

LANDS IN THE WHOLE WEST, ARE THOSE OF NORTHERN MISSOURI.

Rebels are moving away and are selling for whatever they can get. An extensive immigration from the Northern States and from Europe already begun, will soon occupy that part of the State and develop its immense natural wealth. Free and full information given on application to ELI THAYER, 1 Park Place, New-York.

Prairie View Farm for Sale.

A beautiful farm of 160 acres situated near the Fox River, in Kendall Co., Ill. Substantially improved with good fences, house, barn, fruit, &c.

A fine Durham Stock, Horses, Tools, and Household Furniture for sale with the farm if desired.

Address
Oswego, June 30th, 1864.

P. PORTER WIGGINS,
Oswego, Kendall Co., Ill.

TO FARMERS AND OTHERS.

We are manufacturing a Genuine Article of VERY FINE **BONE DUST**, and **RAW BONE SUPERPHOSPHATE OF LIME**, manufactured from unburned Bones, containing all the Animal and Chemical Fertilizing Properties. Please address the Manufacturers, and get the Intrinsic Value of your money.

N. B. A Liberal Discount made to Dealers for Cash.

Address A. LISTER & BRO.,
Newark, N. J.

Bruce's Concentrated Manure.

Those who have used the above valuable fertilizer the past year, give it the preference over

No. 1 Peruvian Guano, Bone, or Poudrette. In the year 1862, some fifty tons were sold. Last year orders came in to the amount of **four hundred tons**, only half of which could be filled. This year we shall manufacture **ONE THOUSAND TONS**.

Its "component" parts are:

40 per cent. of Animal fibre and Blood.

40 per cent. of pure Ground Bones.

20 per cent. of Absorbents.

The absorbents are Charcoal and Gypsum.

Price \$45 Per Ton, packed in barrels 250 lbs. in each.

Send for Circular. Send your orders to
GRIFFING BROTHER & CO.
53 and 60 Courtlandt-st., New-York.

To Settlers Seeking Location on MARYLAND FARMS.

2,800 Acres in 7 farms all adjoining, located in Charles County, 18 miles from Washington City. Upon each farm are good Dwellings and out-buildings, the land is of clay loam and very productive in Tobacco and Fruit, price in the aggregate, \$25 per acre. For a healthy and profitable settlement with choice of neighbors this offers the best of inducements. For sale by R. W. TEMPLEMAN & CO., Baltimore City, Maryland.

WANTED—To exchange for a small farm, improved or unimproved property in Brooklyn. R. C., 41 Park-row.

Strawberry Plants.

"Agriculturist," 75c. each; \$3.00 for six; \$5 per dozen.

	doz.	per 100	per 1000
Austin-Shakers.....	35c.	\$1 50	\$10 00
Bartlett or Boston Fine.....	35c.	1 00	7 50
Cutter's Seedling.....	35c.	1 00	7 50
Downer's Prolific.....	35c.	1 00	7 50
Feast's Fillmore.....	35c.	1 00	7 50
Gen'l. McClellan.....	35c.	1 00	7 50
Green Prolific.....	35c.	1 00	7 50
Hovey's Seedling.....	35c.	1 00	7 50
Hooker.....	35c.	1 00	7 50
La Constante.....	35c.	1 00	7 50
Russell's Prolific.....	35c.	1 00	7 50
Triumph de Gand.....	35c.	1 00	7 50
Ward's Seedling.....	35c.	1 00	7 50
Wilson's Albany.....	35c.	1 00	7 50

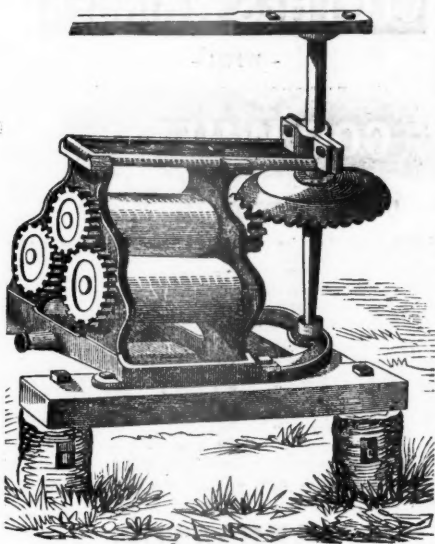
Plants carefully packed and sent pre-paid by mail, at the price per dozen, and by Express by the hundred or thousand. Catalogue descriptive of the above, and over fifty more choice varieties, including ten *new prize sorts*, imported from Europe this season, with directions for cultivation now ready. It contains also lists of Trees, Vines, Shrubs, &c. grown at my Nursery, and is furnished free by mail to all applicants. Address FRANCIS BRILL, Newark, N. J.

SUPERIOR FARM LAND.—20,000 Acres at low prices and accommodating terms.—Franklinville and Lake Tract.—Gloucester County, New Jersey, 35 miles south of Philadelphia on Railroad running from Philadelphia and Camden to Cape May. In lots to suit purchasers. Circulars with reports of Solon Robinson, Hon. Wm. Parry, and others, with full information, sent free by addressing JOHN H. COFFIN & CO., or WILLIAM ARBOTT, Franklinville, New Jersey. Also improved farms from 20 Acres upward.

CALVES RENNETS FOR CHEESE DAIRIES, and for Family Use. A supply always on hand. Orders promptly attended to. Address GEORGE GOODHEART, 737 Greenwich-st., New-York.

Webb South Down Sheep.

I shall sell this season about 100 head, viz.: 20 rams; 40 ewes, and 40 lambs. My lot of yearling rams have never been equalled in this country. J. C. TAYLOR, Holmdel, N. J.

The Victor Cane Mill.**Clark Sorgo Machine Co.**

MANUFACTURERS,

123 Main-st., CINCINNATI, Ohio.

This Mill, constructed upon entirely new principles, was first presented to the Public last year, and immediately took its place at the head of all machinery in its class.

Five State Fair First Premiums!

Were awarded it in rapid succession

Over the Six leading Mills of the Country.

The following are its distinguishing features

Gearing Lapped, by which the Scraper is discarded and Choking rendered impossible, Diagonally Braced.—Main Roll Flanged, Feed Roll Fluted.—Shafting supported in Oil-Tight Step-Boxes.—No Keys are used.—No Cog Wheels to break.—A Perforated False Bottom in the Bear of the Rolls to prevent Bagasse taking up the juice as it leaves the Rolls.—Mill taken apart in Five Minutes, simply by loosening Four Screws.

Six Sizes, \$60 to \$225.

SEND FOR SORGO HAND BOOK.

Italian Queen Bees.

From the Apiary of Dierzon, which, at the last European Bee Convention, was unanimously declared to be the ONLY apiary in Europe from which RELIABLY PURE stock could be obtained. As I have an entire apiary of this stock, bred carefully for upward of four years, and shall TEST and GUARANTEE the PURITY, FERTILITY and safe delivery of queens, when sold, purchasers may RELY upon them.

A limited number of these Queens will be supplied this season at \$10 each. Orders will be filled in strict rotation with their reception. Circulars sent on receipt of a 2 cent stamp. RICHARD COLVIN, Baltimore, Md.

Premium Chester White Pigs.

Progeny of Hogs that have taken State and United States Premiums, sent to all parts of the United States. For Circulars giving prices, etc. Address N. P. BOYER & CO., Coatesville, Chester Co., Penn.

BEEF BONE WANTED.—20,000 round shin Beef Bone wanted in lots of 500 and upward, for which cash will be paid on delivery. Address A. L. SHIPMAN, 35 Ann-st., New-York.

The Unrivalled and only Successful**Cook Sugar Evaporator.**

BLMYER, BATES & DAY,
Mansfield, Ohio.

The increasing favor with which this "Old Reliable" Evaporator is received, is without precedent in the history of Machinery. It has thus far proved to be the only successful mode of Manufacturing A 1 Sorgo Syrup with economy and despatch.

Since its appearance about 125 patents have been issued for contrivances which the Inventors hoped would rival if not supersede Cook's, but usually a few days' experiment with them has resulted in their rejection and a substitution of the unequalled Cook Evaporator. These experiments have taught Farmers that their Sorgo crop is too valuable to be wasted and ruined by untried machinery.

The superiority of the Cook is shown by the fact that it has taken

30 National & State first Premiums.

It has taken the First Premium at 5 Ohio State Fairs in succession over heavy competition.

Over 6000 used last Year!

All Warranted and none returned.

The Cook is the cheapest per square foot; consumes least fuel per gallon; boils most rapidly; is of the best material and workmanship; is the most durable and convenient; is a **SELF DEFECATOR**, and is the only Evaporator free from liability for infringement upon some previous patent.

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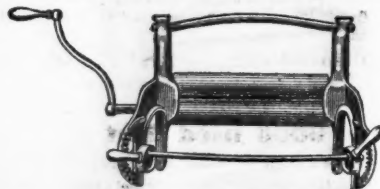
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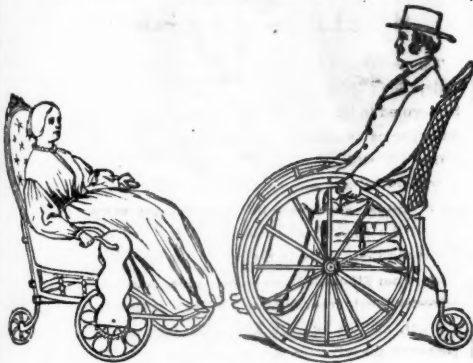
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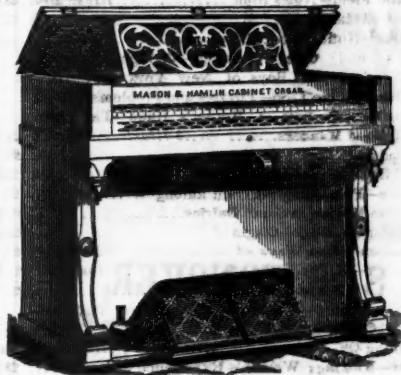
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Contents for August, 1864.

Animals—Comfort for.....	Illustrated.. 240
Battle Field—Notes from.....	Illustrated.. 231
Bees—Apilary in August.....	227
Books—Notice about Price.....	256
Boys and Girls' Columns—Thoughts for Hot Weather—The Boys of New York City III.—Habits of the Lion—Puzzles and Problems—Standing for a Portrait—A Mother's Hand—The Value of Good Manners.....	3 Illustrations.. 247—248
Bread and Yeast.....	247
Budding—Directions for.....	2 Illustrations.. 238
Cattle—Pulmonary Murrain among.....	239
Cheese-Making in Small Dairies.....	235
Chester Co. Hogs—Origin of.....	239
Children—Two Ways of Governing.....	245
Climber—Native (<i>Celastrus scandens</i>).....	Illustrated.. 244
Colors—Influence on Complexion.....	246
Cooking Hints—Marble Cake—Pop-Corn Pudding—To Cook Cabbage.....	247
Cooling Off.....	Illustrated.. 240
Cow—Kicking; Woman's Experience with.....	235
Crystallizing Grasses, Flowers, etc.....	246
Crop Prospects.....	231
Domestics—Management of.....	245
Ducks—Rouen.....	Illustrated.. 233
Ducks—Varieties of Domestic.....	Illustrated.. 233
Dyeing—Good Recipes.....	246
Exhibition Tables at <i>Agriculturist</i> Office.....	227
Exhibitions—Agricultural in 1864.....	228
Exhibitions—Sending Articles to.....	256
Farm Work for August.....	225
Flower Garden and Lawn in August.....	227
Fruit Garden in August.....	227
Garden—Kitchen in August.....	226
Gate Shutter—Simple and Good.....	Illustrated.. 238
Grapery—Cold, in August.....	227
Grass—"Rescue"; A New French Hobby.....	234
Green- and Hot-Houses in August.....	227
Harrow—Efficient.....	Illustrated.. 238
Hay Press—The "Beater".....	Illustrated.. 236
Hogs—Origin of Chester Co. Whites.....	239
Hop Raising in New York.....	238
House—Conveniences in.....	246
Household Hints for August.....	245
Humbugs—Sundry—J. H. Tuttle.....	231
Insects—Grub in the Head of Sheep.....	239
Insects—The Onion Maggot.....	239
Irrigation—Notes on.....	2 Illustrations.. 236
Leatherwood or Wicopy.....	Illustrated.. 243
Letters from Virginia by Mr. Judd.....	Illustrated.. 230—231
Manure from Dead Animals.....	234
Manure—Nothing to Waste.....	240
Map of Vicinity of Petersburg, Va.....	232
Market—Report of N. Y. Live Stock.....	228
Market Review.....	250
Notes and Suggestions for August.....	Illustrated.. 225
Orchard and Nursery in August.....	226
Peaches Improved by Thinning.....	243
Petunia as a Pot Plant.....	243
Politeness—Note on.....	245
"Resurrection" Plants.....	2 Illustrations.. 241
Sanitary Fund Subscriptions.....	249
Seat—"Locomotive".....	Illustrated.. 237
Sheep Husbandry on the Prairies.....	233
Sheep—Grub in the Head.....	239
Soldiers—Care of Sick and Wounded.....	231
Stables—Dirt Floors for.....	235
Strawberry Plants—Producing.....	Illustrated.. 242
Strawberries—Notes on.....	3 Illustrations.. 241
Tobacco Culture.....	237
Tuttle and other Humbugs.....	231
Vegetable Boiler—New.....	Illustrated.. 245
Wagons and Wagon Wheels—Improved.....	234
Weeds—Carpet Weed and Purslane.....	2 Illustrations.. 244

INDEX TO "BASKET," OR SHORTER ARTICLES.

Acorns, Planting.....	229
Aeration of Soils.....	229
Agricult' Exhibitions.....	228
Alderney Cows.....	229
Ants on Pear Trees.....	230
Ashes for Peach Trees.....	229
Asparagus Beds.....	230
Barley—Beardless.....	229
Basil, Sweet.....	230
Book on Breeding.....	229
Bulbs, Treatment of.....	230
Carrot Seed, Cleaning.....	229
Chicken's Windpipe.....	229
Coffee Mixtures.....	229
Cooking in Summer.....	230
Cranberry Tree.....	230
Current Borers.....	230
Current Worm.....	230
Drouth, Lessons from.....	228
Fence Posts.....	229
Fish Manure.....	229
Fruit Book.....	230
Gazania Splendens.....	230
Grapes, Propagating.....	230
Horse Breaking.....	229
Horse Stable Floors.....	229
Howard Association.....	230
Insects Named.....	230
Milk Condensed.....	229
Onion Grub.....	230
Patent Leather.....	230
Pea Bugs.....	229
Peach on Plum Stock.....	229
Peach Tree, Unfruitful.....	230
Peach Trees, Pruning.....	229
Plants Named.....	230
Roses, Propagating.....	230
Sorghum Seed.....	229
Sorghum Sugar.....	229
Sorrel and Sour Soil.....	229
Smut in Onions.....	230
Strawberry Distribution.....	228
Tobacco Curing.....	229
Tobacco Worm Moth.....	229
Turnips and Carrots.....	228
Verbena Montana.....	230
Water, Wholesome.....	230
Water, Signs of.....	230

Distribution of Strawberry Plants—When to Begin.

A terrible drouth is prevailing here; the ground has hardly been wet an inch deep in two months. Mr. Olm is doing all he can by watering, etc., to push forward the strawberry plants, but fears he cannot possibly begin the distribution of them before the last Monday in August at the earliest. Probably the first 5000 of last year's applicants will get their plants early in September, and the rest as fast as possible, immediately after, in the order the applications are on the books. See page 242 for some directions on treating the plants. Of course each one will take all possible care to have the plants well set and cared for as soon as he receives them.

The Agriculturist Strawberry on Sale—Explanation.

It will be seen that plants of this strawberry are advertised for sale, in this month's paper and elsewhere. It was the wish and original intention of the Proprietor, that no plants should be sold, but that they should belong exclusively, at first, to the "Agriculturist family." Some plants, however, were sold by Mr. Boyden before Mr. Judd attempted to secure them. All of these he bought up, except one single plant, which could not be had at any price, but the owner, Mr. Carpenter, generously promised to withhold it from the public until our distribution commenced. This one plant has been carefully cultivated and multiplied during the year, and its product, and this only, is now offered. If others offer plants of the same variety the present summer, they must be obtained from one of these sources or be spurious ones.

Mr. Judd's plants were placed under the care of his skillful gardener, Mr. Olm, who has earnestly watched over them almost night and day for a twelvemonth. As a stimulus to continued extra exertion, on the part of Mr. Olm, and as the plants are to go into market, and also because many are begging the privilege of getting more plants than they are entitled to by subscription, we have written to Mr. Judd, and obtained his consent to the following plan:

Mr. Olm is to push forward the work, and at the earliest moment supply a good, strong plant to every actual old or new subscriber for this year, who has applied or may apply for them on the previous terms, (viz., the year's subscription, and 5 cents extra for postage on the plants.) This will first be carefully attended to. After this is done, the plants remaining will be sold to those first applying for them, at the following rates:

For one good, strong plant,.....	75 cents.
For two " " " ".....	\$1 20
For six " " " ".....	3 00
For twelve " " " ".....	5 00
For one hundred " " " ".....	25 00

Sent post-paid when so desired.

An interest in the sale will be given to Mr. Olm, who will thus be rewarded for his past exertions, and stimulated to the utmost care and effort to get all subscribers well supplied at an early date.

The severe hail storm in June, the hardest ever known here within our memory, badly injured the fruit, and cut the plants somewhat, yet they are very vigorous, and not one was lost during the winter, though part of them were entirely unprotected. There is now every prospect that there will be enough to supply all our subscribers by the middle or before the close of September. We shall be gratified at this. Anything realized from sales will go towards helping out the great expense incurred in the purchase, care, and distribution, and in meeting the great advance in cost of printing paper, etc.

Orders accompanied by money will be filled on the above terms in rotation. It will doubtless be practicable to meet every person's requisition in time to get them well started this year. Of the great value of this new variety something was said in the July No., page 198.

No more Club-rate Subscriptions at Present.

Owing to the enormous advance in all materials, we must suspend Club-rate Subscriptions, for the time being.—Until further notice new subscriptions or renewals will be received at the regular full price of \$1 a year.—Probably the price will have to be advanced soon. Where less than \$1 is sent, a proportionate part of a year will be credited.

Special to Advertisers.

The terms of advertising are necessarily advanced a little, (See pages 249 and 250). A much less space must be devoted to business hereafter, which will make those advertisements inserted all the more valuable. The terms are still very low; Thus: more copies of the *Agriculturist* are sent to actual subscribers, than of all other similar journals in this country; yet to insert five lines in the *Agriculturist* cost \$5 (and less by the column), while the same space in the rest of the agricultural press costs from \$15 to \$20.—Note also, that only reliable advertisements from reliable parties, are inserted in this journal, and its readers know this fact, and value and patronize the advertisers.—NOTE ALSO: This paper is always kept a month, frequently for years, and thus the advertisements are before the readers a long time:—N. B.—1. "First come, first served," is the rule; and—2nd, when the space is full, the gate is shut.

Agricultural Exhibitions.

Our readers will confer a favor by sending to this office notices of the times and places of holding the various State and County Agricultural Exhibitions this year, and if possible giving the name of the secretary of the society, or the active business man, who should be addressed for information about the society or the fair. We desire for the general benefit, to make the list complete.

Books of all Kinds—Notice.

The great fluctuations in the value of legal tender currency, and in the price of book stock of all kinds, render it necessary for publishers to make frequent changes in the price of books. The list prices for one month is therefore no guide for subsequent months, and it will save both us and book purchasers much annoyance if they will consult the list of the month in which they send orders.

Back Volumes & Numbers Supplied.

We have complete sets of Vols. 16, 17, 18, 19, 20, 21, 22, both unbound, and bound in neat covers with gilt lettered backs. Prices at the office: bound \$1.50, unbound \$1.00 each. Back Volumes are sent prepaid by mail, (they can not go unpaid), if bound, \$2.00 each; if unbound, \$1.24 each. Single numbers of any of the above Volumes, 10 cents each.

Binding.—Sets sent to the office will be bound up neatly (in our regular style of binding) for 50 cents a volume. PREPARED COVERS.—Covers for binding, neatly made, with title, etc., gilt upon the back, ready for the insertion of the sheets by any bookbinder, can be furnished for Vols. 16, to 22 inclusive, at 35 cents per cover. Covers can not go by mail.

American Agriculturist.

For the Farm, Garden, and Household.

A THOROUGH-GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; care of DOMESTIC ANIMALS, etc., and to HOUSEHOLD LABORS, with an interesting, instructive department for CHILDREN and YOUTH. The Editors are all PRACTICAL WORKING MEN.

The teachings of the AGRICULTURIST are confined to no State or Territory, but are adapted to all sections of the country—it is for the whole AMERICAN CONTINENT.

TERMS—INVARIABLY IN ADVANCE, For either the English or German Edition... \$1 00 a year.

Add to the above rates: Postage to Canada, 12 cents; to England and France, 24 cents; to Germany, 36 cents. Postage anywhere in the United States and Territories must be paid by the subscriber, and is only three cents a quarter, if paid in advance at the office where it is received. Address all communications to the Editor and Proprietor, ORANGE JUDD, 41 Park-Row, New-York City.